

# UNITED STATES AIR FORCE

## Committee Staff Procurement Backup Book

### FY 2001 Budget Request



February 2000

20000313 084

---

## MISSILE PROCUREMENT, AIR FORCE

---

DTIC QUALITY INSPECTED 3

DISTRIBUTION STATEMENT A  
Approved for Public Release  
Distribution Unlimited

OPR: SAF/FMB

**UNCLASSIFIED**  
**TABLE OF CONTENTS**  
**FY 2001 Budget Request**  
**MISSILE PROCUREMENT, AIR FORCE (3020)**

**SECTION 1 - SUMMARY MATERIAL**

Exhibit P-1 Missile Procurement, Air Force 3

**SECTION 2 - BUDGET APPENDIX EXTRACT LANGUAGE**

Missile Procurement, Air Force - Appendix Language 9

**SECTION 3 - COMPARISON OF PROGRAM REQUIREMENTS AND FINANCING**

Exhibit PB-32B, Comparison of FY 2000 vs. FY 2001 Program Requirements (FY 2001 PB) 13

Exhibit PB-32B, Comparison of FY 2001 Program Requirements: FY 2000/2001 PB vs. FY 2001 PB 14

Exhibit P-45, Summary of Reimbursables 15

**UNCLASSIFIED**  
**TABLE OF CONTENTS**  
**FY 2001 Budget Request**  
**MISSILE PROCUREMENT, AIR FORCE (3020)**

**SECTION 4 - P-1 LINE ITEM DETAIL**

**BUDGET ACTIVITY 01: BALLISTIC MISSILES**

**MISSILE REPLACEMENT EQUIPMENT - BALLISTIC**

P-1 Line Item No. 1 - Missile Replacement Equipment - Ballistic	1-1
---	-----

**BUDGET ACTIVITY 02: OTHER MISSILES**

**STRATEGIC**

P-1 Line Item No. 2 - Advanced Cruise Missile (ACM)	2-1
---	-----

**TACTICAL**

P-1 Line Item No. 3 - Joint Standoff Weapon (JSOW)	2-3
--	-----

P-1 Line Item No. 4 - AGM-130 Powered GBU-15	2-15
--	------

P-1 Line Item No. 5 - Advanced Medium Range Air-to-Air Missile (AMRAAM)	2-17
---	------

**UNCLASSIFIED**  
**TABLE OF CONTENTS**  
**FY 2001 Budget Request**  
**MISSILE PROCUREMENT, AIR FORCE (3020)**

TARGET DRONES

P-1 Line Item No. 6 - Target Drones

2-27

INDUSTRIAL FACILITIES

P-1 Line Item No. 7 - Industrial Facilities

2-33

MISSILE REPLACEMENT EQUIPMENT - OTHER

P-1 Line Item No. 8 - Missile Replacement Equipment - Other

2-35

**BUDGET ACTIVITY 03: MODIFICATION OF IN-SERVICE MISSILES**

MISSILE MODIFICATIONS

Exhibit P-1M, Procurement Programs - Modification Summary

3-1

P-1 Line Item No. 9 - Advanced Cruise Missile (ACM)

3-9

P-1 Line Item No. 10 - Conventional Air Launched Cruise Missile (CALCM)

3-11

P-1 Line Item No. 11 - Sidewinder (AIM-9X)

3-19

iii

**UNCLASSIFIED**

**UNCLASSIFIED**  
**TABLE OF CONTENTS**  
**FY 2001 Budget Request**  
**MISSILE PROCUREMENT, AIR FORCE (3020)**

P-1 Line Item No. 12 - Minuteman III	3-25
P-1 Line Item No. 13 - AGM-65D Maverick	3-39
P-1 Line Item No. 14 - Air Launched Cruise Missile (ALCM)	3-45
P-1 Line Item No. 15 - Peacekeeper	3-49
P-1 Line Item No. 16 - Modifications Under \$5.0 Million	3-53

**BUDGET ACTIVITY 04: SPARES AND REPAIR PARTS**

**MISSILE SPARES AND REPAIR PARTS**

P-1 Line Item No. 17 - Initial Spares/Repair Parts & Replenishment Spares/Repair Parts	4-1
--	-----

**BUDGET ACTIVITY 05: SPACE AND OTHER SUPPORT**

**SPACE PROGRAMS**

P-1 Line Item No. 18 - Wideband Gapfiller Satellites Advance Procurement	5-1
P-1 Line Item No. 19 - Spaceborne Equipment (COMSEC)	5-5

iv

**UNCLASSIFIED**

**UNCLASSIFIED**  
**TABLE OF CONTENTS**  
**FY 2001 Budget Request**  
**MISSILE PROCUREMENT, AIR FORCE (3020)**

P-1 Line Item No. 20 - Navstar Global Positioning System (GPS)	5-9
P-1 Line Item No. 21 - Navstar Global Positioning System (GPS) Advance Procurement	5-21
P-1 Line Item No. 22 - Nuclear Detonation (NUDET) Detection System (NDS)	5-25
P-1 Line Item No. 23 - Inertial Upper Stages (IUS)	5-27
P-1 Line Item No. 24 - Defense Meteorological Satellite Program (DMSP)	5-31
P-1 Line Item No. 25 - Defense Support Program (DSP)	5-35
P-1 Line Item No. 26 - Defense Satellite Communications System (DSCS)	5-39
P-1 Line Item No. 27 - Titan Space Boosters	5-43
P-1 Line Item No. 28 - Evolved Expendable Launch Vehicles (EELV)	5-47
P-1 Line Item No. 29 - Medium Launch Vehicles (MLV)	5-57

**SPECIAL PROGRAMS**

P-1 Line Item No. 30 - Cancelled Account	5-67
--	------

**UNCLASSIFIED**  
**TABLE OF CONTENTS**  
**FY 2001 Budget Request**  
**MISSILE PROCUREMENT, AIR FORCE (3020)**

P-1 Line Item No. 31 - Special Programs

(Submitted under separate cover)

P-1 Line Item No. 32 - Special Update Programs

(Submitted under separate cover)

**UNCLASSIFIED**

**FY 2001 BUDGET REQUEST**

**FEBRUARY 2000**

**SECTION 1:**

**SUMMARY MATERIAL**

**1**

**UNCLASSIFIED**



**UNCLASSIFIED**

**THIS PAGE INTENTIONALLY LEFT BLANK**

<sup>2</sup>  
**UNCLASSIFIED**

## UNCLASSIFIED

DEPARTMENT OF THE AIR FORCE  
FY 2001 PROCUREMENT PROGRAM

FEB 2000

SUMMARY  
(\$ IN MILLIONS)

## APPROPRIATION: MISSILE PROCUREMENT, AIR FORCE

<u>ACTIVITY</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
01. BALLISTIC MISSILES	5.5	15.5	42.3
02. OTHER MISSILES	167.2	134.5	197.3
03. MODIFICATION OF INSERVICE MISSILES	312.0	303.7	409.9
04. SPARES AND REPAIR PARTS	46.7	17.9	44.0
05. OTHER SUPPORT	1,559.9	1,728.5	2,368.3
TOTAL MISSILE PROCUREMENT, AIR FORCE	2,091.4	2,200.1	3,061.7

## UNCLASSIFIED

DEPARTMENT OF THE AIR FORCE  
FY 2001 PROCUREMENT PROGRAM

EXHIBIT P-1

APPROPRIATION: 3020F MISSILE PROCUREMENT, AIR FORCE

DATE: FEB 2000

## MILLIONS OF DOLLARS

LINE NO	ITEM NOMENCLATURE	IDENT CODE	FY 1999 QUANTITY	FY 1999 COST	FY 2000 QUANTITY	FY 2000 COST	FY 2001 QUANTITY	FY 2001 COST	S E C
<u>BUDGET ACTIVITY 01: BALLISTIC MISSILES</u>									
<u>MISSILE REPLACEMENT EQUIPMENT - BALLISTIC</u>									
1	MISSILE REPLACEMENT EQ-BALLISTIC	A		5.5		15.5		42.3	U
TOTAL BALLISTIC MISSILES				5.5		15.5		42.3	
<u>BUDGET ACTIVITY 02: OTHER MISSILES</u>									
<u>STRATEGIC</u>									
2	ADVANCED CRUISE MISSILE	A		1.4		1.0		2.0	U
<u>TACTICAL</u>									
3	JOINT STANDOFF WEAPON	A	86	47.8	74	40.1	174	90.8	U
4	AGM-130 POWERED GBU-15	A		.3		.7		.1	U
5	AMRAAM	A	180	89.7	187	89.7	204	98.7	U
<u>TARGET DRONES</u>									
6	TARGET DRONES	A		25.3					U
<u>INDUSTRIAL FACILITIES</u>									
7	INDUSTRIAL FACILITIES	A		2.7		3.0		3.0	U
<u>MISSILE REPLACEMENT EQUIPMENT - OTHER</u>									
8	MISSILE REPLACEMENT EQ-OTHER	A						2.6	U
TOTAL OTHER MISSILES				167.2		134.5		197.3	
<u>BUDGET ACTIVITY 03: MODIFICATION OF INSERVICE MISSILES</u>									
<u>CLASS IV</u>									
9	ADVANCED CRUISE MISSILE	A				2.9			U
10	CONVENTIONAL ALCM	A		192.3					U
11	SIDEWINDER (AIM-9X)	A						28.4	U

UNCLASSIFIED

PAGE 4

## UNCLASSIFIED

DEPARTMENT OF THE AIR FORCE  
FY 2001 PROCUREMENT PROGRAM

EXHIBIT P-1

APPROPRIATION: 3020F MISSILE PROCUREMENT, AIR FORCE

DATE: FEB 2000

## MILLIONS OF DOLLARS

LINE NO	ITEM NOMENCLATURE	IDENT CODE	FY 1999		FY 2000		FY 2001		S E C
			QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	
12	MM III MODIFICATIONS	A	110.4		276.9		375.1	U	
13	AGM-65D MAVERICK	A	2.9		15.0		2.0	U	
14	AIR LAUNCH CRUISE MISSILE	A					4.1	U	
15	PEACEKEEPER (M-X)	A	6.2		8.8		.1	U	
16	MODIFICATIONS UNDER \$5.0M	A	.2		.1		.1	U	
	TOTAL MODIFICATION OF INSERVICE MISSILES		312.0		303.7		409.9		
<u>BUDGET ACTIVITY 04: SPARES AND REPAIR PARTS</u>									
MISSILE SPARES + REPAIR PARTS									
17	SPARES AND REPAIR PARTS	A	46.7		17.9		44.0	U	
	TOTAL SPARES AND REPAIR PARTS		46.7		17.9		44.0		
<u>BUDGET ACTIVITY 05: OTHER SUPPORT</u>									
SPACE PROGRAMS									
18	WIDEORAND GAFFILLER SATELLITES (SPACE) ADVANCE PROCUREMENT (CY) (FY 2001 FOR FY 2002) (MEMO)						25.7 (25.7)	U	
19	SPACEBORNE EQUIP (COMSEC)	A	9.2		4.5		9.8	U	
20	GLOBAL POSITIONING (SPACE)	A	87.8		125.4		196.9	U	
21	GLOBAL POSITIONING (SPACE) ADVANCE PROCUREMENT (CY) (FY 2001 FOR FY 2002) (MEMO)						13.4 (13.4)	U	
22	NUDET DETECTION SYSTEM	A	2.8		1.5		1.5	U	
23	INERTIAL UPPER STAGES (SPACE)	A	43.0					U	
24	DEF METEOROLOGICAL SAT PROG (SPACE)	A	40.6		35.8		68.6	U	
25	DEFENSE SUPPORT PROGRAM (SPACE)	A	87.0		108.3		106.4	U	
26	DEFENSE SATELLITE COMM SYSTEM (SPACE)	A	27.6		30.4		22.8	U	

UNCLASSIFIED

PAGE 5

## UNCLASSIFIED

DEPARTMENT OF THE AIR FORCE  
FY 2001 PROCUREMENT PROGRAM

EXHIBIT P-1

APPROPRIATION: 3020F MISSILE PROCUREMENT, AIR FORCE

DATE: FEB 2000

## MILLIONS OF DOLLARS

LINE NO	ITEM NOMENCLATURE	IDENT CODE	FY 1999		FY 2000		FY 2001		S E C
			QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	
27	TITAN SPACE BOOSTERS (SPACE)	A		535.6		429.3		469.7	U
28	EVOLVED EXPENDABLE LAUNCH VEH (SPACE)	A			1	68.1	3	288.0	U
29	MEDIUM LAUNCH VEHICLE (SPACE)	A	5	(225.0)		(64.0)		(55.9)	U
	LESS: ADVANCE PROCUREMENT (PY)			(-52.7)					U
				172.3		64.0		55.9	
SPECIAL PROGRAMS									
30	CANCELLED ACCOUNT	A		10.2					U
31	SPECIAL PROGRAMS	A		525.7		663.5		968.5	U
32	SPECIAL UPDATE PROGRAMS	A		18.2		197.6		141.1	U
TOTAL OTHER SUPPORT				1,559.9		1,728.5		2,368.3	
TOTAL MISSILE PROCUREMENT, AIR FORCE				2,091.4		2,200.1		3,061.7	

**UNCLASSIFIED**

**FY 2001 BUDGET REQUEST**

**FEBRUARY 2000**

**SECTION 2:**

**BUDGET APPENDIX EXTRACT LANGUAGE**

**UNCLASSIFIED**

**UNCLASSIFIED**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**8  
UNCLASSIFIED**

**Budget Appendix Extract Language  
Fiscal Year 2001 Budget Estimates  
Missile Procurement, Air Force**

For construction, procurement, and modification of missiles, spacecraft, rockets, and related equipment, including spare parts and accessories therefor, ground handling equipment, and training devices; expansion of public and private plants, Government-owned equipment and installation thereof in such plants, erections of structures, and acquisition of land, for the foregoing purposes, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; reserve plant and Government and contractor-owned equipment layaway; and other expenses necessary for the foregoing purposes including rents and transportation of things; \$3,061,700,000 to remain available for obligation until September 30, 2003; and, \$75,000,000 in obligation authority for the reimbursable programs to remain available until September 30, 2001.



**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

**FY 2001 BUDGET REQUEST**

**FEBRUARY 2000**

**SECTION 3:**

**COMPARISON OF PROGRAM REQUIREMENTS AND FINANCING**

**UNCLASSIFIED**

**THIS PAGE INTENTIONALLY LEFT BLANK**

<sup>12</sup>  
**UNCLASSIFIED**

**Missile Procurement, Air Force (3020)**  
**Comparison of FY 2000 vs. FY 2001 Program Requirements**  
**as Documented in the FY 2001 Budget Request**  
**(TOA, Dollars in Millions)**

<u>Budget Activity (BA)</u>	<u>Total FY 2000 Program Rqmts Per FY01 PB</u>	<u>Total FY 2001 Program Rqmts Per FY01 PB</u>	<u>Increase (+) or Decrease (-)</u>
BA 01: Ballistic Missiles	\$15.452	\$42.308	\$26.856
BA 02: Other Missiles	134.524	197.257	62.733
BA 03: Modification of In-Service Missiles	303.686	409.863	106.177
BA 04: Spares and Repair Parts	17.889	44.026	26.137
BA 05: Space and Other Support	1,728.533	2,368.261	639.728
Reimbursable Program	<u>75.000</u>	<u>75.000</u>	<u>0.000</u>
<b>Total Fiscal Year Program</b>	<b>\$2,275.084</b>	<b>\$3,136.715</b>	<b>\$861.631</b>

**Explanation by Budget Activity**

**BA 01: Ballistic Missiles**

Increase due to direction to procure new support equipment necessary to continue Peacekeeper retention and sustainment. Significant new Peacekeeper support equipment includes Air Elevator Support Trailers, Auxiliary Power Units/Environmental Control Systems, and Truck/Tractor Missile Emplacer and Payload Transporter. Further increases driven by first year procurement of the Minuteman III Reentry System Test System (RSTS).

**BA 02: Other Missiles**

Increase due to the first year of Air Force production of the Joint Standoff Weapon BLU-108 variant (AGM-154B) -- total JSOW quantities increased from 74 in FY00 to 174 in FY01. Also, AMRAAM procurement rate was increased (from 187 in FY00 to 204 in FY01).

**BA 03: Modification of In-Service Missiles**

Increase due to Minuteman III Guidance Replacement Program (GRP) kit production increase from 65 in FY00 to 80 in FY01; Minuteman III Propulsion Replacement Program (PRP) entering full rate production in FY01 -- remanufactures increase from 9 in FY00 to 33 in FY01; Minuteman Minimum Essential Emergency Communications Network (MEECN) modifications beginning in FY01; and AIM-9X (Sidewinder) begins Low Rate Initial Production in FY01.

**BA 04: Spares and Repair Parts**

Increase due to higher initial spares requirements driven by increased production of Minuteman III GRP and PRP. Increases in replenishment spares driven by MM III Mk 12 reentry vehicle battery replacement initiative and direction for increased levels for replenishment spares.

**BA 05: Space and Other Support**

Increase due to EELV launch services procurement increase from one in FY00 to three in FY01; start of Wideband Capfiller Satellites advance parts buys for satellites 1, 2, & 3, FY01 start of Navstar GPS modernization program to add new military and civil signal and improve against jamming threats; and significant increases in classified program funding.

**UNCLASSIFIED**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

**Missile Procurement, Air Force (3020)**  
**Comparison of FY 2001 Program Requirements:**  
**FY 2000/2001 Budget Request vs. FY 2001 Budget Request**  
**(TOA, Dollars in Millions)**

<u>Budget Activity (BA)</u>	<u>Total FY 2001 Program Rqmts Per FY00/01 PB</u>	<u>Total FY 2001 Program Rqmts Per FY01 PB</u>	<u>Increase (+) or Decrease (-)</u>
BA 01: Ballistic Missiles	\$21.841	\$42.308	\$20.467
BA 02: Other Missiles	254.293	197.257	-57.036
BA 03: Modification of In-Service Missile	354.508	409.863	55.355
BA 04: Spares and Repair Parts	36.635	44.026	7.391
BA 05: Space Other Support	2,669.928	2,368.261	-301.667
Reimbursable Program	<u>75.000</u>	<u>75.000</u>	<u>0.000</u>
<b>Total Fiscal Year Program</b>	<b>\$3,412.205</b>	<b>\$3,136.715</b>	<b>-\$275.490</b>

**Explanation by Budget Activity**

**BA 01: Ballistic Missiles**

Increase due to direction to procure new support equipment necessary to continue Peacekeeper retention and sustainment. Significant new Peacekeeper support equipment includes Air Elevator Support Trailers, Auxiliary Power Units/Environmental Control Systems, and Truck/Tractor Missile Emplacer and Payload Transporter.

**BA 02: Other Missiles**

Decrease due to the restructure of the JASSM program, delaying production by one year to FY2002.

**BA 03: Modifications of In-Service Missiles**

Increase due to direction to increase Minuteman III Guidance Replacement Program (GRP) kit production from 58 to 80 kits. An additional increase is driven from a transfer of Minuteman Essential Emergency Communications Network (MEECN) funding from the Other Procurement, Air Force (OPAF) to Missile Procurement, Air Force (MPAF).

**BA 04: Spares and Repair Parts**

Increase due to the Minuteman III Mk 12 reentry vehicle battery replacement initiative and direction for Peacekeeper replenishment spares.

**BA 05: Space and Other Support**

Decrease due to delayed procurement of three GPS IIF satellites by two years to FY03; decrease in EELV launch services procurement from six to three -- delayed two GPS IIF satellite launches and one Discoverer II launch; and transfer of Wideband Gapfiller Satellite funding from Missile Procurement, Air Force (MPAF) to RDT&E, Air Force.

**UNCLASSIFIED**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

Exhibit P-45, Summary of Reimbursables				Date: February 2000			
Appropriation: Missile Procurement, Air Force (TOA, Dollars in Millions)							
P-1 Line Item	FY99		FY00		FY01		
	QTY	ctual Reimb	QTY	Est. Reimb	QTY	Est. Reimb	
P-1 Line No. 20 - Navstar GPS		\$5.000		\$0.000		\$0.000	
P-1 Line No. 27 - Titan Space Boosters		\$20.000		\$10.000		\$20.000	
P-1 Line No. 31 - Special Programs		\$5.000		\$10.000		\$10.000	
Undistributed/Anticipated		\$45.000		\$55.000		\$45.000	
<b>TOTAL</b>		<b>\$75.000</b>		<b>\$75.000</b>		<b>\$75.000</b>	
<b>Requested</b>		<b>\$75.000</b>		<b>\$75.000</b>		<b>\$75.000</b>	
Comments:							



**UNCLASSIFIED**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

**UNCLASSIFIED**

**FY 2001 BUDGET REQUEST**

**FEBRUARY 2000**

**SECTION 4:**

**P-1 LINE ITEM DETAIL**

**UNCLASSIFIED**

**UNCLASSIFIED**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

**UNCLASSIFIED**

**FY 2001 BUDGET REQUEST**

**FEBRUARY 2000**

**SECTION 4:**

**P-1 LINE ITEM DETAIL**

**UNCLASSIFIED**

**UNCLASSIFIED**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

**UNCLASSIFIED**

**FY 2001 BUDGET REQUEST**  
**BUDGET ACTIVITY 01 – BALLISTIC MISSILES**  
**FEBRUARY 2000**

**UNCLASSIFIED**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

# UNCLASSIFIED

<b>BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)</b>		<b>DATE: FEBRUARY 2000</b>	
<b>APPROP CODE/BA:</b> MPAF/MISSILE SUPPORT EQUIPMENT		<b>P-1 NOMENCLATURE:</b> MISSILE REPLACEMENT EQUIPMENT-BALLISTIC (OVERVIEW)	
		<b>FY1999</b>	<b>FY2000</b>
<b>QUANTITY</b>			
<b>COST</b> (in Thousands)		\$5,512	\$15,452
		\$42,308	\$37,046
		\$19,829	\$34,398
			\$25,399
<p><b>Description:</b></p> <p>1. This program funds replacement support equipment for strategic ballistic missile weapons systems. Equipment procured supports missile weapons systems maintenance and testing at organizational/intermediate (base/field), launch control facilities, as well as missile testing facilities. FY99-01 funding provides replacement support equipment items for an aging inventory of equipment which has become increasingly costly to maintain. These items will increase ballistic missile system reliability and maintainability by providing state-of-the-art maintenance repair and testing capability.</p> <p>2. Currently, the program supports the LGM-30 Minuteman III and LGM-118A Peacekeeper missile weapons systems. Requirements are jointly determined by Headquarters, United States Air Force (HQ USAF), Air Force Materiel Command (AFMC), and Air Force Space Command (AFSPC) based on established allowance standards.</p> <p>3. FY01 funding increased from FY00/01 President's Budget due to requirements for retaining Peacekeeper assets in a ready condition.</p> <p>4. Items requested in FY01 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on critical equipment needed to support current Air Force mission requirements.</p>			
<b>P-1 ITEM NO:</b> 1		<b>PAGE NO:</b> 1 - 1	
		Page 1 of 1	

UNCLASSIFIED



# UNCLASSIFIED

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)				DATE: FEBRUARY 2000			
APPROP CODE/BA: MPAF/MISSILE SUPPORT EQUIPMENT				P-1 NOMENCLATURE: MISSILE REPLACEMENT EQUIPMENT-BALLISTIC (OVERVIEW)			
PROCUREMENT ITEMS	ID CODE	FY1999		FY2000		FY2001	
		QTY.	COST	QTY.	COST	QTY.	COST
PENDULOUS INTEGRATING GYRO ACCELEROMETER TEST STATION (PIGA TS)	A			9	\$9,560		
REENTRY SYSTEM TEST SYSTEM (RSTS)	A					4	\$5,589
AIR ELEVATOR SUPPORT TRAILER (AEST)	A					1	\$6,897
AUXILIARY POWER UNIT/ENVIRONMENTAL CONTROL SYSTEM (APU/ECS)	A					32	\$8,944
ITEMS LESS THAN \$5 MILLION	A				\$5,512		\$20,878
<b>Totals:</b>					\$5,512		\$42,308
<b>Remarks:</b>							

# UNCLASSIFIED

**BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)**

DATE: FEBRUARY 2000

**APPROP CODE/BA:**

## P-1 NOMENCLATURE:

MPAF/MISSILE SUPPORT EQUIPMENT

REENTRY SYSTEM TEST SYSTEM (RSTS)

		FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005
<b>QUANTITY</b>								
<b>COST (in Thousands)</b>		\$0	\$0	\$5,589	\$7,713	\$0	\$0	\$0

**Description:**

1. The Reentry System Test System (RSTS) provides functional, continuity and isolation check-out of the Reentry System and Reentry Vehicles for the Minuteman III weapon system. It consists of a console, maintenance self-check adapter and targeting simulator, and is programmed by an electronic reader to functionally check the reentry system. The parameters used by the RSTS include resistance, voltage, time frequency and pressure. While the RSTS primarily tests operational Minuteman reentry systems, it may also be used for troubleshooting and checkout functions. The current RSTS has become technologically outdated, unreliable, and can no longer be effectively maintained. It has exceeded its design life by more than four times original design. Meantime between failure of the systems is decreasing, and meantime to repair and down-time due to non-availability of spare parts is increasing. Replacement test systems will be procured with FY01 funding. The LGM-30 Minuteman III is supported by this system.

2. The Minuteman III weapon system's service life has been extended indefinitely. This extension requires supportable test equipment to maintain the weapon system's alert ready status. Lack of RSTS equipment to test reentry systems and reentry vehicles potentially degrades the alert rate status of both Air Force Space Command and US Strategic Command.

### 3. Type Item: A

	<b>P-1 ITEM NO:</b> 1	<b>PAGE NO:</b> 1-3	Page 1 of 1
--	--------------------------	------------------------	-------------

**UNCLASSIFIED**

# UNCLASSIFIED

<b>BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)</b>						<b>DATE: FEBRUARY 2000</b>			
<b>APPROP CODE/BA:</b> MPAF/MISSILE SUPPORT EQUIPMENT				<b>P-1 NOMENCLATURE:</b> REENTRY SYSTEM TEST SYSTEM (RSTS)					
ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
RSTS									
FY01	4	1397222	AFMC/OO-ALC	OPT/FPIS	PENTASTAR ELECTRONICS, HUNTSVILLE, AL	APR 01	MAR 02	Y	
<b>REMARKS:</b> FY01 option to FY94 competitive contract.									
P-1 ITEM NO: 1				PAGE NO: 1 - 4		Page 1 of 1			

UNCLASSIFIED

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)										DATE: FEBRUARY 2000	
<b>APPROP CODE/BA:</b> MPAF/MISSILE SUPPORT EQUIPMENT					<b>P-1 NOMENCLATURE:</b> AIR ELEVATOR SUPPORT TRAILER (AEST)						
			FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005		
<b>QUANTITY</b>											
<b>COST</b> (in Thousands)			\$0	\$0	\$6,897	\$11,545	\$0	\$0	\$0	\$0	
<b>Description:</b> <p>1. The Air Elevator Support Trailer (AEST) is a unique Peacekeeper mobile vehicle positioned at the missile Launch Facility during installation, removal, and maintenance operations. It supplies compressed air to raise the Air Elevator in the launch canister and to operate the elevator brakes, the elevator position stops, and the Longitudinal Restraint Mechanisms. It pressurizes a mobile pneumatic control cart stationed in the Launch Facility area and a pneumatic tool manifold located within the Launch Facility silo. The AEST is required to install and remove the Peacekeeper missile from the silo for inspections and repairs. Reliable, serviceable parts for the existing support trailers have become a serious problem due to non-availability of manufactured parts. This trailer supports the LGM-118A Peacekeeper missile weapon system for sustainment and deactivation.</p> <p>2. Failure to fund this equipment will impact the Peacekeeper support posture and degrade the Air Force's capability to meet sustainment and deactivation requirements.</p> <p>3. Items requested in FY01 are identified on the following P-5 and are representative of items to be procured. Items procured during execution may change based on critical equipment needed to support current Air Force mission requirements.</p>											
					<b>P-1 ITEM NO:</b> 1		<b>PAGE NO:</b> 1 - 5		Page 1 of 1		

**UNCLASSIFIED**

# UNCLASSIFIED

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)				DATE: FEBRUARY 2000						
<b>APPROP CODE/BA:</b> MPAF/MISSILE SUPPORT EQUIPMENT				<b>P-1 NOMENCLATURE:</b> AIR ELEVATOR SUPPORT TRAILER (AEST)						
WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY1999			FY2000			FY2001		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
AIR ELEVATOR SUPPORT TRAILER (AEST)	A							1	4,129,000	4,129
ENGINEERING										816
PROGRAM SUPPORT										1,952
<b>TOTALS:</b>										6,897
<b>REMARKS:</b>										
P-1 ITEM NO: 1		PAGE NO: 1 - 6		Page 1 of 1						

# UNCLASSIFIED

# UNCLASSIFIED

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)						DATE: FEBRUARY 2000			
APPROP CODE/BA: MPAF/MISSILE SUPPORT EQUIPMENT				P-1 NOMENCLATURE: AIR ELEVATOR SUPPORT TRAILER (AEST)					
ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
AIR ELEVATOR SUPPORT TRAILER (AEST)									
FY01	1	4129000	AFMC/OO-ALC	SS/CPAF	TRW, OGDEN, UT	JAN 01	FEB 03	Y	
REMARKS:									
P-1 ITEM NO: 1			PAGE NO: 1 - 7		Page 1 of 1				

UNCLASSIFIED

**BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)**

**APPROP CODE/BA:**

MPAF/MISSILE SUPPORT EQUIPMENT

		FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005
<b>QUANTITY</b>								
<b>COST (in Thousands)</b>		\$0	\$0	\$8,944	\$0	\$0	\$0	\$0

1. The Auxiliary Power Unit/Environmental Control System (APU/ECS), unique to the Peacekeeper missile weapon system, maintains the internal temperature of the Stage II/III Container and Stage IV/Reentry System (RS)/Latch Effect Gas Generator (LEGG)/Longitudinal Support Assembly (LSA) Emplacement Container. It also charges the Physical Security System (PSS) batteries in the Stage IV container. Reliable, serviceable replacement parts for the existing power unit/control system are no longer available due to obsolescence. This system supports the LGM-118A Peacekeeper missile weapon system for sustainment and deactivation.

3. Items requested in FY01 are identified on the following P-5 and are representative of items to be procured. Items procured during execution may change based on critical equipment needed to support current Air Force mission requirements.

Page 1 of 1

**UNCLASSIFIED**

# UNCLASSIFIED

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)				DATE: FEBRUARY 2000						
APPROP CODE/BA: MPAF/MISSILE SUPPORT EQUIPMENT				P-1 NOMENCLATURE: AUXILIARY POWER UNIT/ENVIRONMENTAL CONTROL SYSTEM						
WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY1999			FY2000			FY2001		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
AUXILIARY POWER UNIT/ENVIRONMENTAL CONTROL SYSTEM	A							32	255,156	8,165
DATA										436
TOOLING										156
PROGRAM SUPPORT										187
TOTALS:										8,944
REMARKS:										
P-1 ITEM NO: 1		PAGE NO: 1 - 9		Page 1 of 1						

# UNCLASSIFIED



# UNCLASSIFIED

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)						DATE: FEBRUARY 2000			
APPROP CODE/BA: MPAF/MISSILE SUPPORT EQUIPMENT				P-1 NOMENCLATURE: AUXILIARY POWER UNIT/ENVIRONMENTAL CONTROL SYSTEM					
ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
AUXILIARY POWER UNIT/ENVIRONMENTAL CONTROL SYSTEM									
FY01	32	255,156	AFMC/OO-ALC	SS/CPAF	TRW, OGDEN, UT	JAN 01	JAN 02	Y	
REMARKS:									
P-1 ITEM NO: 1				PAGE NO: 1 - 10		Page 1 of 1			

UNCLASSIFIED

# UNCLASSIFIED

<b>BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)</b>		<b>DATE: FEBRUARY 2000</b>						
<b>APPROP CODE/BA:</b>		<b>P-1 NOMENCLATURE:</b>						
MPAF/MISSILE SUPPORT EQUIPMENT		BALLISTIC MISSILE ITEMS LESS THAN \$5 MILLION						
		FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005
<b>QUANTITY</b>								
<b>COST</b> (in Thousands)		\$5,512	\$5,892	\$20,878	\$0	\$0	\$0	\$0
<b>Description:</b> <p>1. The "Items Less Than \$5 Million" line funds replacement support equipment for the LGM-30 Minuteman III and LGM-118A Peacekeeper missile weapons systems. Equipment procured provides for missile weapons systems maintenance and testing at organizational/intermediate levels, launch and launch control facilities, as well as missile testing facilities. Procurement of the items required by both systems will reduce downtime and delays due to scheduling and non-availability of critical test data. Procurement of these items will also ensure cost effective maintenance is accomplished on schedule and will increase missile readiness. Headquarters United States Air Force (HQ USAF), Air Force Materiel Command (AFMC), and Air Force Space Command (AFSPC) jointly determine requirements based on established allowance standards.</p> <p>2. All items have an annual procurement value of less than \$5,000,000 and are Code A. Items requested in FY01 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on critical equipment needed to support Air Force mission requirements.</p>								
<b>P-1 ITEM NO:</b> 1		<b>PAGE NO:</b> 1 - 11			<b>Page 1 of 1</b>			

# UNCLASSIFIED

# UNCLASSIFIED

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A-IL)		DATE: FEBRUARY 2000	
<b>APPROP CODE/BA:</b> MPAF/MISSILE SUPPORT EQUIPMENT		<b>P-1 NOMENCLATURE:</b> BALLISTIC MISSILE ITEMS LESS THAN \$5 MILLION	
PROCUREMENT ITEMS	NSN	FY2001	
		QTY.	COST
MISSILE READINESS INTEGRATED SUPPORT FACILITY	NSL		\$1,169
SURVIVABILITY AND VULNERABILITY INTEGRATION CENTER	NSL	1	\$2,929
MULTI-CONFIGURATION VIBRATION TEST SYSTEM	NSL	1	\$1,919
RADIATION LABORATORY DATA ACQUISITION SYSTEM	NSL	1	\$3,103
ELECTROMAGNETIC PULSE FREE-FIELD SIMULATOR	NSL	1	\$1,149
TRUCK, TRACTOR MISSILE EMPLACER	1450011909209	14	\$4,052
RECORDING THERMOMETER	6685014630554	30	\$137
TRUCK, TRACTOR, PAYLOAD TRANSPORTER	NSL	1	\$3,900
IGNITER CIRCUIT TESTER	NSL	16	\$2,520
<b>TOTALS:</b>			\$20,878

P-1 ITEM NO: 1	PAGE NO: 1 - 12	Page 1 of 1
-------------------	--------------------	-------------

# UNCLASSIFIED

**UNCLASSIFIED**

**FY 2001 BUDGET REQUEST**  
**BUDGET ACTIVITY 02 – OTHER MISSILES**  
**FEBRUARY 2000**

**UNCLASSIFIED      Page 2 - 0**

**UNCLASSIFIED**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Item Justification</b>										Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
<b>Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 2</b>										<b>Advanced Cruise Missile</b>	
Program Element for Code B Items:										N/A	
Other Related Program Elements:											
	ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total
Proc Qty	A										
Total Proc Cost (\$ M)			1.353	1.039	2.006	2.022	2.038	2.031	2.156		12.645
<p><b>Description</b></p> <p>The Advanced Cruise Missile (ACM) is a low-observable, air-launched, strategic missile with significant improvements over the Air Launched Cruise Missile B version (ALCM-B) in range, accuracy, and survivability. Armed with a W80 warhead, it is designed to evade air and ground-based defenses in order to strike heavily defended, hardened targets at any location within any enemy's territory. The ACM is designed for B-52H external carriage.</p> <p><b>FY 2001 Program Justification</b></p> <p>Funds program management and administrative activities related to the ongoing purchase of flight test instrumentation kits and to support follow-on operational test and evaluation (FOT&amp;E).</p>											
P-1 Shopping List Item No. 2										Budget Item Justification	
UNCLASSIFIED										Exhibit P-40, page 1 of 1	

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Item Justification</b>										<b>Date: February 2000</b>			
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature			
<b>Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 3</b>										<b>Joint Stand-Off Weapon</b>			
Program Element for Code B Items: N/A										Other Related Program Elements:			
	ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total		
Proc Qty	A	45	86	74	174	164	216	454	561	4,340	6,114		
Cost (\$ M)		29.235	47.776	40.067	90.828	64.279	77.771	131.860	179.449	1156.164	1817.429		
Advance Proc Cost (\$ M)		0.000								0.000	0.000		
Weapon System Cost (\$ M)		29.235	47.776	40.067	90.828	64.279	77.771	131.860	179.449	1156.164	1817.429		
Initial Spares (\$ M)		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Total Proc Cost (\$ M)		29.235	47.776	40.067	90.828	64.279	77.771	131.860	179.449	1156.164	1817.429		
Flyaway Unit Cost (\$ M)		N/A	0.360	0.356	0.348	0.339	0.353	0.287	0.318	0.266			
Wpns Sys Unit Cost (\$ M)		N/A	0.524	0.550	0.522	0.392	0.360	0.290	0.320	0.266			

**Description**

The Joint Standoff Weapon (JSOW) is a Navy lead joint program with the Air Force. The JSOW, a family of low cost, air-to-ground weapons, utilizes a Global Position System aided Inertial Navigation System (GPS/INS) and a kinematically efficient airframe with an inherent range capability, satisfying JSOW requirements. The JSOW will provide a launch and leave standoff capability for aircraft to attack interdiction targets from outside enemy point defenses during day/night and adverse weather conditions. The design strategy of the JSOW system calls for initial development of a basic vehicle, followed by the low-risk development of evolutionary upgrades for improved accuracy, enhanced kill capability, and an expanded target set. There are currently three configurations of the JSOW being developed: JSOW Baseline (AGM-154A) for soft and area targets, JSOW/BLU-108 (AGM-154B) for attacking massed land-combat vehicles, and JSOW Unitary (AGM-154C) for harder/point targets and increased kill effectiveness. The Air Force is buying the JSOW Baseline and the JSOW/BLU-108 variants (AGM-154A and AGM-154G). The threshold Air Force aircraft for employment of JSOW is the F-16C/D Block 50, but it will also be integrated on the B-1B, B-2, B-52, F-16C/D Block 30/40, and F-15E. The Air Force accepted its first JSOW in Nov 99. The B-2 will be JSOW operational in FY00; the B-52 and F-16 will be JSOW operational in FY01.

The current production program is based on a buy of 6,114 weapons for the Air Force (3,000 AGM-154A and 3,114 AGM-154B). The BLU-108 submunition is procured from Textron via the SFW production contract and provided to the JSOW program as Government Furnished Equipment (GFE). The P31 submunition will be incorporated in the FY01 AGM-154B buy. Prior AGM-154B buys will contain the baseline BLU-108 submunition.

The JSOW P-1 line includes funding for production of the BRU-57, a MIL-STD-1760 dual-carriage ejector rack. BRU-57 will allow the F-16C/D to carry four smart weapons, satisfying a JSOW threshold requirement. BRU-57 funds will also acquire BRU-57/F-16 test equipment to support the BRU-57 in the field. This P-1 line also includes funding for SEEK EAGLE (PE 0207590F) procurement to accomplish certification of JSOW on aircraft and with other stores.

Note 1: The FY00 AGM-154B budget was zeroed, eliminating 119 LRP II AGM-154Bs, and increasing the FY00 AGM-154A unit cost.

Note 2: Air Force and Navy hardware costs are not comparable due to the following differences: AGM-154A Navy BLU-97 fuse costs, and AGM-154A payload GFE costs.

**FY 2001 Program Justification**

Funds continuation of Full Rate Production (FRP) of AGM-154A, starts procurement of the P31 AGM-154B, and completes BRU-57 procurement.

P-1 Shopping List Item No. 3

**Budget Item Justification**  
**Exhibit P-40, page 1 of 12**



**UNCLASSIFIED**

Exhibit P-40A, Budget Item Justification for Aggregated Items										Date: February 2000			
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature			
Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 3										Joint Stand-Off Weapon			
Procurement Items (\$M)	ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total		
JSOW Summary	A	29,235	47,776	40,067	90,828	64,279	77,771	131,860	179,449	1156,164	1817,429		
Quantity	A	45	86	74	174	164	216	454	561	4,340	6,114		
	A												
JSOW AGM 154 -A	A	18,455	22,796	29,917	20,743	20,369	21,520	42,758	33,975	388,004	598,537		
Quantity	A	45	75	74	74	74	82	225	176	2,175	3,000		
	A												
JSOW AGM 154 -B	A	1,700	11,469	0,000	47,785	42,887	55,076	87,833	144,207	768,160	1159,117		
Quantity	A	0	11	0	100	90	134	229	385	2,165	3,114		
	A												
BRU-57	A	0,000	4,000	9,000	22,300	0,000	0,000	0,000	0,000	0,000	35,300		
Quantity	A	0	16	77	248	0	0	0	0	0	341		
	A												
Seek Eagle	A	9,080	9,511	1,150	0,000	1,023	1,175	1,269	1,267	0,000	24,475		
Quantity	A	26	31	12	0	10	12	12	12	0	115		
Total		29,235	47,776	40,067	90,828	64,279	77,771	131,860	179,449	1156,164	1817,429		

**Remarks**

										P-1 Shopping List Item No. 3			
										Budget Item Justification for Aggregated Items			
										Exhibit P-40A, page 2 of 12			

## UNCLASSIFIED

Exhibit P-5, Weapon System Cost Analysis				Date: February 2000			
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number				P-1 Line Item Nomenclature			
Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 3				Joint Stand-Off Weapon			
Manufacturer's Name/Plant City/State Location				Subline Item			
RAYTHEON SYSTEMS / TUCSON, AZ				JSOW AGM 154-B			
Weapon System Cost Elements				Total Cost In Millions of Dollars			
	Ident Code	FY 1999			FY 2000		
		Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE	A						
ALL UP ROUND	A	11		6.166	0		0.000
CNTR (WARRANTY/ECO/DATA)	A			0.065			0.000
PROCUREMENT SUPPORT	A						
GOVT IN-HOUSE/PROD SPT/OTHER	A			1.225			0.000
SPECIAL TOOLS AND TEST EQUIP	A			1.220			0.000
CONTAINERS	A			0.305			0.000
TELEMETRY	A			0.000			0.000
TOTAL FLYAWAY COST	A			8.981			0.000
SUPPORT COST	A						
ILS/SUPPORT	A			2.488			0.000
BRU-57	A						
SEEK EAGLE	A						
TOTAL PROGRAM				11.469			0.000
47.785							
<b>Comments</b>							
BRU-57 and SEEK EAGLE costs are not included in the AGM-154B Total Program Line in this P-5 Exhibit, but are included in the JSOW Summary P-5 Exhibit.							
P-1 Shopping List Item No. 3				Weapon System Cost Analysis			
UNCLASSIFIED				Exhibit P-5, page 3 of 12			

## UNCLASSIFIED

Exhibit P-5, Weapon System Cost Analysis										Date: February 2000
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature
<b>Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 3</b>										<b>Joint Stand-Off Weapon</b>
Manufacturer's Name/Plant City/State Location										Subline Item
RAYTHEON SYSTEMS / TUCSON, AZ										JSOW AGM 154 -A
Weapon System Cost Elements	Ident Code	Total Cost In Millions of Dollars								
		FY 1999			FY 2000			FY 2001		
		Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE	A									
ALL UP ROUND	A	75		15.763	74		14.367	74		12.344
CNTR (WARRANTY/ECO/DATA)	A			0.605			2.506			0.627
PROCUREMENT SUPPORT	A									
GOVT IN-HOUSE/PROD SPT/OTHER	A			1.639			5.730			1.653
SPECIAL TOOLS AND TEST EQUIP	A			1.220			0.866			0.400
CONTAINERS	A			1.090			0.755			0.829
TELEMETRY	A			0.000			1.500			0.681
TOTAL FLYAWAY COST	A			20.317			25.724			16.534
SUPPORT COST	A									
ILS/SUPPORT	A			2.479			4.193			4.209
BRU-57	A			22.796			29.917			20.743
SEEK EAGLE	A									
TOTAL PROGRAM				22.796			29.917			20.743
<b>Comments</b>										
The ECO estimate increases in FY00 for the following reasons: AGM -154B line requalification costs, center of gravity mass balance engineering change, and performance characterization test costs including one test asset.										
Due to Congressional deferral of AGM -154B procurement in FY00, GOVT IN-HOUSE/PROD SPT/OTHER were rolled up in the AGM -154A line. These costs remain constant within a year and are required even with Congressional deferral. Further increases to this line in FY00 can be attributed to contractor support costs.										
BRU-57 and SEEK EAGLE costs are not included in the AGM-154A Total Program Line in this P-5 Exhibit, but are included in the JSOW Summary P-5 Exhibit.										
P-1 Shopping List Item No. 3										Weapon System Cost Analysis Exhibit P-5, page 4 of 12

## UNCLASSIFIED

Exhibit P-5, Weapon System Cost Analysis				Date: February 2000			
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number				P-1 Line Item Nomenclature			
Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 3				Joint Stand-Off Weapon			
Manufacturer's Name/Plant City/State Location				Subline Item			
RAYTHEON SYSTEMS / TUCSON, AZ				JSOW Summary			
Weapon System Cost Elements				Total Cost In Millions of Dollars			
Ident Code	FY 1999			FY 2000			FY 2001
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	
HARDWARE							
ALL UP ROUND	86		21.929	74		14.367	47.543
CNTR (WARRANTY/ECO/DATA)			0.670			2.506	2.873
PROCUREMENT SUPPORT							
GOVT IN-HOUSE/PROD SPT/ OTHER			2.864			5.730	3.861
SPECIAL TOOLS AND TEST EQUIP			2.440			0.866	3.012
CONTAINERS			1.395			0.755	1.950
TELEMETRY			0.000			1.500	1.362
TOTAL FLYAWAY COST			29.298			25.724	60.601
SUPPORT COST							
ILS/SUPPORT			4.967			4.193	7.927
BRU-57	16		4.000	77		9.000	22.300
SEEK EAGLE	31		9.511	12		1.150	
TOTAL PROGRAM			47.776			40.067	90.828
<b>Comments</b>							
The ECO estimate increases in FY00 for the following reasons: AGM -154B line requalification costs, center of gravity mass balance engineering change, and performance characterization test costs including one test asset.							
Due to Congressional deferral of AGM -154B procurement in FY00, GOVT IN-HOUSE/PROD SPT/OTHER were rolled up in the AGM -154A line. These costs remain constant within a year and are required even with Congressional deferral. Further increases to this line in FY00 can be attributed to contractor support costs.							
P-1 Shopping List Item No. 3				Weapon System Cost Analysis			
UNCLASSIFIED				PAGE 2 - 7			
Exhibit P-5, page 5 of 12							

## UNCLASSIFIED

Exhibit P-5A, Procurement History and Planning										Date: February 2000		
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature		
Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 3										Joint Stand-Off Weapon		
Weapon System										Subline Item		
JSOW												
WBS Cost Elements	Qty	Unit Cost	Location of PCO	RFP Issue Date	Contract Method	Contract Type	Contractor and Location	Award Date	Date of First Delivery	Specs Available Now?	Date Revisions Available?	
A. SEEK EAGLE												
FY 1998	7	0.159	NAVAIR		SS	FPIF	RAYTHEON SYSTEMS (Tucson, AZ)	Dec-97	Jan-99			
FY 1999	31	0.211	NAVAIR		SS	FFP	RAYTHEON SYSTEMS (Tucson, AZ)	Dec-98	Mar-00			
FY 2000	12	0.096	NAVAIR		SS	FFP	RAYTHEON SYSTEMS (Tucson, AZ)	Dec-99	Mar-01			
B. AGM-154A												
FY 1998	45	0.378	NAVAIR		SS	FPIF	RAYTHEON SYSTEMS (Tucson, AZ)	Dec-97	Jan-00			
FY 1999	75	0.210	NAVAIR		SS	FFP	RAYTHEON SYSTEMS (Tucson, AZ)	Dec-98	Mar-00			
FY 2000	74	0.194	NAVAIR		SS	FFP	RAYTHEON SYSTEMS (Tucson, AZ)	Dec-99	Mar-01			
FY 2001	74	0.167	NAVAIR		SS	FFP	RAYTHEON SYSTEMS (Tucson, AZ)	Dec-00	Mar-02			
C. AGM-154B												
FY 1999	11	0.561	NAVAIR		SS	FFP	RAYTHEON SYSTEMS (Tucson, AZ)	Dec-98	Mar-00			
FY 2001	100	0.352	NAVAIR		SS	FFP	RAYTHEON SYSTEMS (Tucson, AZ)	Dec-00	Mar-02			
D. BRU-57												
FY 1999	16	0.115	AFMC/AA C		SBSA	FPIF	M-TECHNOLOGIES (Horsham, PA)	Apr-99	Dec-00			
P-1 Shopping List Item No. 3										Procurement History and Planning		
										Exhibit P-5A, page 6 of 12		

<b>Exhibit P-5A, Procurement History and Planning</b>										Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
<b>Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 3</b>										<b>Joint Stand-Off Weapon</b>	
<b>Weapon System</b>											
Subline Item Continued											
WBS Cost Elements	Qty	Unit Cost	Location of PCO	RFP Issue Date	Contract Method	Contract Type	Contractor and Location	Award Date	Date of First Delivery	Specs Available Now?	Date Revisions Available?
FY 2000	77	0.106	AFMC/AA C		SBSA	FFP	M-TECHNOLOGIES (Horsham, PA)	May-00	Apr-01		
FY 2001	248	0.084	AFMC/AA C		SBSA	FFP	M-TECHNOLOGIES (Horsham, PA)	May-99	Apr-02		
<b>Remarks</b>											
All unit costs include hardware costs only.											
Seek Eagle unit costs are not consistent due to significant variations in test article configurations being procured.											
										Procurement History and Planning Exhibit P-5A, page 7 of 12	

**Exhibit P-21, Production Schedule**

**Date: February 2000**

**Exhibit P-21, Production Schedule**

**Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number**

### **P-1 Line Item Nomenclature**

### Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 3

[illegible]

**P-1 Shopping List Item No. 3**

**Production Schedule  
Exhibit P-21, page 8 of 12**

**Exhibit P-21 (2), Production Schedule**

Date: February 2000

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

**P-1 Line Item Nomenclature**

## Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 3

[illegible]

REMARKS

**P-1 Shopping List Item No. 3**

## Production Schedule



UNCLASSIFIED

## Exhibit P-21 (3), Production Schedule

Date: February 2000

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

P-1 Line Item Nomenclature

## Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 3

## Joint Stand-Off Weapon

ITEM/MANUFACTURER/ PROCUREMENT YEAR	S E R V	PROC. QTY	ACCEP. PRIOR TO 1 OCT 2002	BALANCE DUE AS OF 1 OCT 2002	FISCAL YEAR 2003												FISCAL YEAR 2004												L A T T E R		
					CALENDAR YEAR 2003												CALENDAR YEAR 2004														
					2002	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S		
RCS FY 98	USAF	45	45	0																											
RCS FY 98	USN	135	135	0																											
RCS FY 99	USAF	86	86	0																											
RCS FY 99	USN	328	328	0																											
RCS FY 00	USAF	74	74	0																											
RCS FY 00	USN	454	454	0																											
RCS FY 01	USAF	174	99	75	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	0	
RCS FY 01	USN	636	371	265	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	0	
RCS FY 02	USAF	164	0	164																											0
RCS FY 02	USN	747	0	747																											0
RCS FY 03	USAF	216	0	216																											0
RCS FY 03	USN	709	0	709																											0
RCS FY 04	USAF	454	0	454																											0
RCS FY 04	USN	603	0	603																											0
RCS FY 05	USAF	561	0	561																											0
RCS FY 05	USN	504	0	504																											0
TOTAL		5,890	1,592	4,298	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	504
					PRODUCTION RATES												PROCUREMENT LEAD TIME														L A T T E R
					MIN	SHIFT	MA	REACHED																							
					SUST	HOURS	A	D+																							
						42	1-8-5	200																							

UNCLASSIFIED

## Exhibit P-21 (4), Production Schedule

Date: February 2000

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

P-1 Line Item Nomenclature

## Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 3

## Joint Stand-Off Weapon

ITEM/MANUFACTURER/ PROCUREMENT YEAR	S E R V	PROC. QTY	ACCEP. PRIOR TO 1 OCT 2004	BALANCE DUE AS OF 1 OCT 2004	FISCAL YEAR 2005												FISCAL YEAR 2006												L A T E R																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
					CALENDAR YEAR 2005												CALENDAR YEAR 2006																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
					2004																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
					O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
RSC FY 98	USAF	45	45	0																								0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

REMARKS

P-1 Shopping List Item No. 3

Production Schedule

Exhibit P-21 (4), page 11 of 12

UNCLASSIFIED PAGE 2 - 13

**Exhibit P-21 (5), Production Schedule**

**Date: February 2000**

**Exhibit P-21 (5), Production Schedule**

<b>Appropriation (Treasury)</b>	<b>Code/CC/BA/BSA/Item</b>	<b>Control Number</b>

### **P-1 Line Item Nomenclature**

**Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 3**

## Joint Stand-Off Weapon

[illegible]

**P-1 Shopping List Item No. 3**

**Production Schedule  
Exhibit P-21 (5), page 12 of 12**

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Item Justification</b>										Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
<b>Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 4</b>										<b>AGM-130 Powered GBU-15</b>	
Program Element for Code B Items:										Other Related Program Elements:	
N/A											
ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total	
A											
Proc Qty											
Total Proc Cost (\$ M)		0.329	0.715	0.096						1.140	
<p><b>Description</b></p> <p>The AGM-130 is a pre-planned product improvement (P3I) to the GBU-15 guided glide bomb. The AGM-130 is the Air Force's premiere guided standoff weapon and is delivered by F-15E aircraft. The missile is the only precision strike weapon with a 2,000 pound warhead capable of being delivered from fighter aircraft at a standoff range, thus allowing high probability of kill for critical enemy targets while minimizing aircraft attrition by allowing launch outside of target point defenses.</p> <p><b>FY 2001 Program Justification</b></p> <p>Funds the AGM-130 System Program Office's program management and administrative costs.</p>											
P-1 Shopping List Item No. 4										Budget Item Justification Exhibit P-40, page 1 of 1	

**THIS PAGE INTENTIONALLY LEFT BLANK**

# UNCLASSIFIED

## Exhibit P-40, Budget Item Justification

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

### Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 5

Date: February 2000

P-1 Line Item Nomenclature

### Advanced Medium Range Air-to-Air Missile (AMRAAM)

Program Element for Code B Items:			Other Related Program Elements:							N/A		
	ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total	
Proc Qty	A	6,549	180	187	204	222	222	221	221	492	8,498	
Cost (\$ M)		5846.664	89.714	89.670	98.687	115.384	109.564	110.846	112.426	241.780	6814.735	
Advance Proc Cost (\$ M)												
Weapon System Cost (\$ M)		5846.664	89.714	89.670	98.687	115.384	109.564	110.846	112.426	241.780	6814.735	
Initial Spares (\$ M)		61.709	0.725	0.192	0.138	0.119	0.124	0.123	0.123	0.400	63.653	
Total Proc Cost (\$ M)		5908.373	90.439	89.862	98.825	115.503	109.688	110.969	112.549	242.180	6878.388	
Flyaway Unit Cost (\$ M)		0.873	0.497	0.418	0.421	0.448	0.425	0.420	0.418	0.414		
Wpn Sys Unit Cost (\$ M)		0.902	0.498	0.480	0.481	0.520	0.494	0.502	0.509	0.491		

#### Description

The Advanced Medium Range Air-to-Air (AMRAAM) is the next generation all-weather, all environment radar guided missile developed jointly by the Air Force and Navy to augment the AIM-7 Sparrow. AMRAAM is smaller, faster, lighter, and has improved capabilities against very low- and high-altitude high-speed targets in an electronic attack (EA) environment. AMRAAM incorporates an active radar in conjunction with an inertial reference unit and a microcomputer system, which makes the missile less dependent upon the fire control system. The advanced capability enables the pilot to aim and fire several missiles at multiple targets.

The Defense Acquisition Board approved AMRAAM Full Rate Production (Milestone IIIB) in April 1992. In FY98, the AMRAAM program includes a price-based acquisition strategy offered to a single AMRAAM Prime Contractor as a 'Total Package Deal.' The 'Deal' includes a Long Term Pricing Agreement (LTPA), Total System Performance Responsibility (TSPR), and sustainment activities to include depot and development activity. The net effect reduces total program costs.

#### Notes:

- The Total Proc Cost in FY01 does not include \$0.612M Seek Eagle funds from PE: 0207590
- The Flyaway and Wpn Sys Unit Costs identified in the To Comp column are the average costs for the remaining 492 units

#### FY 2001 Program Justification

The Lot 15 program is a continuing procurement of missiles for the AF, Navy, and Foreign Military Sales (FMS) participants. The plan includes 204 AF AIM-120C-6 missiles and two Separation Test Vehicles funded under Program Element 0207590 for the Seek Eagle program. The P3I Phase 3 production implementation program begins this fiscal year to ensure supplies and equipment are ready for production cut-in for the improved missile in Lot 16. The Training Equipment line includes additional 83 Warhead Replaceable Tactical Telemetry (WRTTM) units for the Weapon System Evaluation Program (WSEP).

P-1 Shopping List Item No. 5

Budget Item Justification  
Exhibit P-40, page 1 of 9

## UNCLASSIFIED

Exhibit P-5, Weapon System Cost Analysis										Date: February 2000				
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature				
Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 5										Advanced Medium Range Air-to-Air Missile (AMRAAM)				
Manufacturer's Name/Plant City/State Location					Subline Item									
Raytheon, Tucson AZ														
Weapon System Cost Elements		Ident Code	Total Cost In Millions of Dollars											
			FY 1999			FY 2000			FY 2001					
			Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
Quantity		A	180				187				204			
Flyaway Cost		A												
Missile Hardware-Recurring														
1. Missile Price		A			63.481					55.110				58.110
2. Warranty		A			0.689					0.727				0.805
3. Other Hardware		A			0.000					2.077				2.119
4. Engineering Change Orders		A			2.929					2.792				2.987
Subtotal Missile Hardware		A			67.099					60.706				64.021
Recurring Production Support														
1. Production Test/Support		A			8.933					9.655				9.649
2. Interim Contractor Support (ICS)		A			3.917					0.000				0.000
3. Program Management Adm		A			2.006					1.548				1.901
Nonrecurring Cost														
1. P3I Phase 2 Implementation		A			0.350					0.000				0.000
2. P3I Phase 3 Implementation		A			0.000					6.192				10.258
3. Anti-Tamper for the Processor		A			6.000					0.000				0.000
4. High Order Lang Processor Mod		A			1.209					0.000				0.000
5. Other Investments		A			0.000					0.000				0.000
Total Missile Flyaway Cost		A			89.514					78.101				85.829
Support Cost														
1. Peculiar Support Equipment		A			0.200					1.180				1.193
2. Depot		A			0.000					0.000				0.000
3. Training Equipment		A			0.000					10.389				11.053
P-1 Shopping List Item No. 5										Weapon System Cost Analysis Exhibit P-5, page 2 of 9				





**UNCLASSIFIED**

<b>Exhibit P-5A, Procurement History and Planning</b>										Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
<b>Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 5</b>										<b>Advanced Medium Range Air-to-Air Missile (AMRAAM)</b>	
<u>Weapon System</u>										<u>Subline Item</u>	
<b>AMRAAM</b>											
<b>WBS Cost Elements</b>	<b>Qty</b>	<b>Unit Cost</b>	<b>Location of PCO</b>	<b>RFP Issue Date</b>	<b>Contract Method</b>	<b>Contract Type</b>	<b>Contractor and Location</b>	<b>Award Date</b>	<b>Date of First Delivery</b>	<b>Specs Available Now?</b>	<b>Date Revisions Available?</b>
FY 98 Lot 12 Production	173	0.589	AAC/AFM C	Oct-97	SS	FP	Raytheon, Tucson, AZ	Mar-98	Oct-99	Yes	
FY 99 Lot 13 Production	180	0.498	AAC/AFM C	Oct-98	SS	FP	Raytheon, Tucson, AZ	Mar-99	Oct-00	Yes	
FY 00 Lot 14 Production	187	0.480	AAC/AFM C	Oct-99	SS	FP	Raytheon, Tucson, AZ	Mar-00	Sep-01	Yes	
FY 01 Lot 15 Production	204	0.481	AAC/AFM C	Oct-00	SS	FP	Raytheon, Tucson, AZ	Mar-01	Aug-02	Yes	
<u>Remarks</u>											
Lot Production buys are for All-Up-Round Missiles.											
Unit Cost Calculations assume 100 USN missiles in FY99 and FY00, 75 USN missiles in FY01 and FY02, and 521 FMS missiles in FY00 and 600 FMS missiles FY01.											
P-1 Shopping List Item No. 5										Procurement History and Planning Exhibit P-5A, page 4 of 9	

UNCLASSIFIED

## Exhibit P-21, Production Schedule

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

## Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 5

Date: February 2000

P-1 Line Item Nomenclature

## Advanced Medium Range Air-to-Air Missile (AMRAAM)

ITEM/MANUFACTURER/ PROCUREMENT YEAR	S E R V	PROC. QTY	ACCEP. PRIOR TO 1 OCT 1998	BALANCE DUE AS OF 1 OCT 1998	FISCAL YEAR 1999												FISCAL YEAR 2000												L A T E R					
					CALENDAR YEAR 1999												CALENDAR YEAR 2000																	
					1998																													
					O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P						
AMRAAM FY 95 (Lot 9, cont)		2,434	2,334	100																										100				
Raytheon Tucson	USAF	197	197	0																										0				
Raytheon Tucson	USN	56	56	0																										0				
Raytheon Andover	USAF	264	165	99																										0				
Raytheon Andover	USN	74	73	1																										0				
Raytheon Tucson	FMS	234	234	0																										0				
Raytheon Andover	FMS	307	307	0																										0				
AMRAAM FY96 (Lot 10, cont)		1,302	1,035	267																										267				
Raytheon Tucson	USAF	150	150	0																										0				
Raytheon Tucson	USN	60	60	0																										0				
Raytheon Andover	USAF	141	141	0																										0				
Raytheon Andover	USN	55	55	0																										0				
Raytheon Tucson	FMS	461	287	174																										0				
Raytheon Andover	FMS	429	336	93																										0				
Raytheon Tucson	OTH	3	3	0																										0				
Raytheon Andover	OTH	3	3	0																										0				
AMRAAM FY97 (Lot 11)		829	0	829																										829				
Raytheon Tucson	USAF	72	72	0																										0				
Raytheon Tucson	USN	53	0	53																										0				
Raytheon Andover	USAF	61	0	61																										0				
Raytheon Andover	USN	47	0	47																										0				
Raytheon Tucson	FMS	314	0	314																										0				
Raytheon Andover	FMS	281	0	281																										0				
Raytheon Andover	OTH	1	0	1																										0				
AMRAAM FY98 (Lot 12)		877	0	877																										877				
Raytheon	USAF	173	0	173																										0				
Raytheon	USN	120	0	120																										0				
Raytheon	FMS	584	0	584																										0				
TOTAL		4,140	2,067	2,073																										0				
					PRODUCTION RATES			MIN			SHIFT			M			PROCUREMENT LEAD TIME																	
					SUST			HOURS			A			D+			REACHED			ADMIN			LEAD TIME			MFG			TOTAL					
					LOCATION			Tucson, AZ			X			1,440						PRIORITY			AFTER			1 OCT			1 OCT					
MANUFACTURER'S NAME																																		
Raytheon Systems Company																																		

## REMARKS

\*\* Raytheon consolidated production at Tucson, AZ during FY98. However, contracts are still separate until Lot 12.

P-1 Shopping List Item No. 5

Production Schedule  
Exhibit P-21, page 5 of 9

UNCLASSIFIED

PAGE 2 - 21

## UNCLASSIFIED

## Exhibit P-21 (2), Production Schedule

Date: February 2000

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

P-1 Line Item Nomenclature

## Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 5

## Advanced Medium Range Air-to-Air Missile (AMRAAM)

ITEM/MANUFACTURER/ PROCUREMENT YEAR	S E R V	PROC. QTY	ACCEP. PRIOR TO 1 OCT 2000	BALANCE DUE AS OF 1 OCT 2000	FISCAL YEAR 2001												FISCAL YEAR 2002												L A T T E R																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
					CALENDAR YEAR 2001												CALENDAR YEAR 2002																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
					2000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
					O C T	N	D	J	F	M	A	P	R	Y	J	J	A	S	O	N	D	J	F	M	A	P	R	Y		J	J	A	S																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

MANUFACTURER'S NAME	LOCATION	PRODUCTION RATES			REACHED			PROCUREMENT LEAD TIME			MFG TIME			TOTAL AFTER 1 OCT		
		MIN	SUST	SHIFT	M	A	D+	ADMIN	LEAD TIME		PRIOR	AFTER				
		HOURS	DAYS	X	1,440						1 OCT	1 OCT				
Raytheon Systems Company	Tucson, AZ	450	1200								0	6		18	24	
REMARKS																

P-1 Shopping List Item No. 5

Production Schedule

Exhibit P-21 (2), page 6 of 9

UNCLASSIFIED

## Exhibit P-21 (3), Production Schedule

Date: February 2000

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

P-1 Line Item Nomenclature

## Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 5

## Advanced Medium Range Air-to-Air Missile (AMRAAM)

ITEM/MANUFACTURER/ PROCUREMENT YEAR	S E R V	PROC. QTY	ACCEP. PRIOR TO 1 OCT 2002	BALANCE DUE AS OF 1 OCT 2002	FISCAL YEAR 2003												FISCAL YEAR 2004												L A T E R	
					2002				CALENDAR YEAR 2003								CALENDAR YEAR 2004													
					O	N	D	E	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A		S
					C	V	C	C	A	B	A	P	R	Y	N	L	G	E	C	O	E	A	B	R	R	Y	N	L		U
AMRAAM FY01 (Lot 15) cont		881	146	735																							735			
Raytheon	USAF	204	34	170	17	17	17	17	17	17	17	17	17														0			
Raytheon	USN	75	12	63	6	6	6	6	6	7	7	7															0			
Raytheon	FMS	600	100	500	50	50	50	50	50	50	50	50	50														0			
Raytheon	OTH	2	0	2		1	1																				0			
AMRAAM FY02 (Lot 16)		897	0	897																							897			
Raytheon	USAF	222	0	222											18	18	18	18	19	19	19	19	19				0			
Raytheon	USN	75	0	75											6	6	6	6	6	6	7	7	7				0			
Raytheon	FMS	600	0	600											50	50	50	50	50	50	50	50	50				0			
AMRAAM FY03 (Lot 17)		897	0	897																							897			
Raytheon	USAF	222	0	222																					18	18	186			
Raytheon	USN	75	0	75																							63			
Raytheon	FMS	600	0	600																							500			
TOTAL		2,675	146	2,529	73	73	74	74	73	73	74	74	74	74	74	74	74	75	75	75	76	76	76	74	74	74	749			

MANUFACTURER'S NAME	LOCATION	PRODUCTION RATES				REACHED D+	PROCUREMENT LEAD TIME					MFG TIME	TOTAL AFTER 1 OCT
		MIN SUST	SHIFT HOURS	DAYS	M A X		ADMIN LEAD TIME			PRIORITY			
							PRIOR 1 OCT	AFTER 1 OCT					
Raytheon Systems Company	Tucson, AZ	450	1200	1,440				0	6	18	24		

REMARKS

P-1 Shopping List Item No. 5

Production Schedule

Exhibit P-21 (3), page 7 of 9

UNCLASSIFIED PAGE 2 - 23

**Exhibit P-21 (4), Production Schedule**

**Date: February 2000**

**Exhibit P-21 (4), Production Schedule**

**Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number**

**P-1 Line Item Nomenclature**

**Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 5**

## Advanced Medium Range Air-to-Air Missile (AMRAAM)

[illegible]

REMARKS

**P-1 Shopping List Item No. 5**

## Production Schedule

Exhibit P-21 (4), page 8 of 9

**UNCLASSIFIED** **PAGE 2 - 24**

**Exhibit P-21 (5), Production Schedule**

Date: February 2000

Date: February 2000

**Exhibit P-21 (5), Production Schedule**

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

### P-1 Line Item Nomenclature

## Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 5

## Advanced Medium Range Air-to-Air Missile (AMRAAM)

[illegible]

REMARKS

**P-1 Shopping List Item No. 5**

**Production Schedule  
Exhibit P-21 (5), page 9 of 9**

**UNCLASSIFIED** **PAGE 2 - 25**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Item Justification</b>												Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number												P-1 Line Item Nomenclature	
<b>Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 6</b>												<b>Target Drones</b>	
Program Element for Code B Items:												PE 0604258F	
Other Related Program Elements:													
	ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total		
Proc Qty	A												
Cost (\$ M)		186.441	25.301								211.742		
Advance Proc Cost (\$ M)													
Weapon System Cost (\$ M)		186.441	25.301								211.742		
Initial Spares (\$ M)		186.441	0.173								186.614		
Total Proc Cost (\$ M)		372.882	25.474								398.356		
Flyaway Unit Cost (\$ M)													
Wpn Sys Unit Cost (\$ M)													
<p><b>Description</b></p> <p>The target drones program funds for aerial targets to ensure air-to-air weapons effectiveness and mission proficiency of Air Force tactical weapon systems. The objective is to improve air-to-air weapon system accuracy and reliability by developing aerial target systems for Air Force weapon systems test and evaluation. The program provides funds for the procurement of full-scale (QF-4) and subscale aerial targets required for Congressionally mandated live fire tests.</p> <p><b>FY 2001 Program Justification</b></p> <p>N/A - Starting FY00 funding for Target Drones transitioned from Missile Procurement, Air Force (MPAF) to Aircraft Procurement, Air Force (APAF). This Exhibit documents MPAF funding through FY99.</p>													
P-1 Shopping List Item No. 6												Budget Item Justification	
UNCLASSIFIED												Exhibit P-40, page 1 of 6	



## UNCLASSIFIED

Exhibit P-5, Weapon System Cost Analysis										Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 6										Target Drones	
Manufacturer's Name/Plant City/State Location										Subline Item	
QF-4 (BAE Syatems, Mojave, CA), BQM-34 (Northrup Grumman, San Diego, CA)											
Weapon System Cost Elements		Ident Code	Total Cost In Millions of Dollars								
			FY 1999			FY 2000			FY 2001		
			Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
QF-4 FULL SCALE AERIAL TARGET FLYAWAY COST			A								
QF-4 Hardware Recurring			A								
Aircraft Drone Mod & Integ			A	12	0.617	7.400					
Scoring System (VDOPS)			A								
F-4 In Plant Repairs			A			0.316					
Environ Stress Test of Destruct Units			A								
Engineering Change Orders (ECO)			A			0.037					
Warranty			A			0.187					
Aircraft Withdrawal/AMARC			A								
Restricted Manned Perf to 3G			A	3	0.578	1.735					
Restricted Manned Perf to 6G			A	8	0.375	3.000					
MILSTRIP RST			A			0.150					
MILSTRIP EOQ			A			0.200					
FLYAWAY COST SUBTOTAL			A			13.025					
QF-4 Support Cost			A								
Data Tech Manuals			A			0.055					
On-call Engineering Support			A								
Prime Contractor Technical Support			A			0.113					
Government Support			A			1.302					
SUPPORT COST SUBTOTAL			A			1.470					
INITIAL SPARES			A			0.173					
BQM-34 SUBSCALE FLYAWAY COST			A								
Airframes			A	15	0.547	8.205					
ECO			A			0.123					
P-1 Shopping List Item No. 6										Weapon System Cost Analysis Exhibit P-5, page 2 of 6	

## UNCLASSIFIED

Exhibit P-5, Weapon System Cost Analysis										Date: February 2000		
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature		
Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 6										Target Drones		
Weapon System Cost Elements		Ident Code	Total Cost In Millions of Dollars									
			FY 1999			FY 2000			FY 2001			
			Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	
Government Furnished Equipment (GFE)		A										
Engines		A	15	0.022	0.330							
IFF (L-Band) Transponders		A	15	0.003	0.048							
Locator Beacons		A	15	0.003	0.047							
BQM-34 FLYAWAY COST SUB TOTAL		A			8.926							
BQM-34 Support Cost		A										
Data Tech Manuals		A			0.107							
NTSSAT FAAT Testing		A										
Government Testing		A										
Range System Support -Drone Control		A										
On Site Support Redstone Arsenal		A			0.138							
Other Technical Support		A			0.853							
Other		A			0.139							
Interim Maintenance support for VDOPS		A			0.816							
BQM-34 SUPPORT COST SUBTOTAL		A			2.053							
TOTAL PROGRAM					25.474							

Comments

Starting FY00 funding for Target Drones transitioned from Missile Procurement, Air Force (MPAF) to Aircraft Procurement, Air Force (APAF). This Exhibit documents funding only through FY99.

**UNCLASSIFIED**

<b>Exhibit P-5A, Procurement History and Planning</b>										Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
<b>Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 6</b>										<b>Target Drones</b>	
<u>Weapon System</u>											
Subline Item											
<b>TARGET</b>											
WBS Cost Elements	Qty	Unit Cost	Location of PCO	RFP Issue Date	Contract Method	Contract Type	Contractor and Location	Award Date	Date of First Delivery	Specs Available Now?	Date Revisions Available?
FY99 (QF-4)	12	1.085	AAC/WRA		C	FFP	BAE SYSTEMS , MOJAVE, CA	Dec-98	Jun-99	Yes	
FY99 (BQM-34)	15	0.595	AAC/WRA		C	FFP	NORTHROP GRUMMAN, SAN DIEGO, CA	Mar-99	Nov-00	Yes	
<u>Remarks</u>											
Starting FY00 funding for Target Drones transitioned from Missile Procurement, Air Force (MPAF) to Aircraft Procurement, Air Force (APAF). This Exhibit documents funding only through FY99.											
										Procurement History and Planning	
										Exhibit P-5A, page 4 of 6	

UNCLASSIFIED

Exhibit P-21, Production Schedule

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 6

P-1 Line Item Nomenclature

Target Drones

Date: February 2000

ITEM/MANUFACTURER/ PROCUREMENT YEAR	S E R V	PROC. QTY	ACCEP. PRIOR TO 1 OCT 1998	BALANCE DUE AS OF 1 OCT 1998	FISCAL YEAR 1999												FISCAL YEAR 2000												L A T E R			
					CALENDAR YEAR 1999												CALENDAR YEAR 2000															
					1998			1999			2000			2001			2002			2003			2004			2005				2006		
					O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				
BAE SYSTEMS (QF-4)/FY97	USAF	18	0	18		2	2	2	2	2	2	2	2	1	1																	0
BAE SYSTEMS (QF-4)/FY98	USAF	11	0	11																												0
BAE SYSTEMS (QF-4)/FY99	USAF	12	0	12																												12
BAE SYSTEMS (MQM-107E)/FY93	USAF	22	4	18							3	7	7	1																		0
BAE SYSTEMS (MQM-107E)/FY94	USAF	56	0	56												6	7	7	7	7	7	7	7	7	1							0
BAE SYSTEMS (MQM-107E)/FY97	USAF	8	0	8																												0
ARMY (OPT)																																
NORTHROP GRUMMAN (BQM-34)/FY98	USAF	6	0	6																												3
NORTHROP GRUMMAN (BQM-34)/FY99	USAF	15	0	15																												15
TOTAL																																
					PRODUCTION RATES					PROCUREMENT LEAD TIME																						
					MIN	SUST	SHIFT	M	REACHED					ADMIN					MFG					TOTAL								
							HOURS	A	D+					LEAD TIME					TIME					AFTER								
							DAYS	X																								
MANUFACTURER'S NAME					LOCATION																											
BAE SYSTEMS (QF-4)					MOJAVE, CA																											
NORTHROP GRUMMAN (BQM-34)					SAN DIEGO, CA																											
BAE SYSTEMS (MQM-107E)					AUSTIN, TX																											
							3	13	5																							

REMARKS

Starting FY00 funding for Target Drones transitioned from Missile Procurement, Air Force (MPAF) to Aircraft Procurement, Air Force (APAF). This document only contains funding through FY99.

P-1 Shopping List Item No. 6

Production Schedule

Exhibit P-21, page 5 of 6

UNCLASSIFIED

PAGE 2 - 31

UNCLASSIFIED

## Exhibit P-21 (2), Production Schedule

Date: February 2000

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

P-1 Line Item Nomenclature

## Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 6

## Target Drones

ITEM/MANUFACTURER/ PROCUREMENT YEAR	S E R V	PROC. QTY	ACCEP. PRIOR TO 1 OCT 2000	BALANCE DUE AS OF 1 OCT 2000	FISCAL YEAR 2001												FISCAL YEAR 2002												L A T E R	
					CALENDAR YEAR 2001												CALENDAR YEAR 2002													
					2000																									
					O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P		
BAE SYSTEMS (QF-4)/FY99	USAF	12	0	12	1	1	1	1	1	1	1	1	1	1	1	1											0			
NORTHROP GRUMMAN (BQM-34)/FY98	USAF	6	3	3	3																						0			
NORTHROP GRUMMAN (BQM-34)/FY99	USAF	15	0	15					2	2	4	4	3														0			
TOTAL																														
					PRODUCTION RATES				PROCUREMENT LEAD TIME																					
					MIN SUST	SHIFT HOURS	M A X									ADMIN LEAD TIME				MFG TIME				TOTAL AFTER 1 OCT						
						DAYS	X									PRIOR 1 OCT				AFTER 1 OCT										
																INITIAL REORDER				0				5				6		
MANUFACTURER'S NAME					LOCATION																									
BAE SYSTEMS (QF-4)					MOJAVE, CA																									
NORTHROP GRUMMAN (BQM-34)					SAN DIEGO, CA																									

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Item Justification</b>										Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
<b>Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 7</b>										<b>Industrial Facilities</b>	
Program Element for Code B Items:										Other Related Program Elements:	
N/A											
ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total	
A											
Proc Qty											
Total Proc Cost (\$ M)		2.746	3.033	3.017	3.058	3.079	3.136	3.201		21.270	
<b>Description</b>											
<p>1. Air Force Industrial Preparedness combines resources of several appropriations to create a comprehensive program. The goal is to ensure the defense industry can supply reliable, affordable systems to operational commanders. Key program elements include management of government-owned industrial plants, the Defense Production Act, and industrial base (IB) activities. IB activities characterize the critical sectors and industries within the IB and provide information on capability issues for consideration during budget allocation, weapon acquisition, and logistics support decisions.</p> <p>2. Two basic activities are funded in this appropriation: Industrial Facilities and Industrial Planning:</p> <p>Industrial Facility cost element -- MPCs 3000 and 7000: Repair and expansion, major rehabilitation, environmental compliance, equipment movement and energy conservation at AF-owned, contractor-operated industrial facilities. These plants are the backbone of DoD weapon system assembly and maintenance supporting Cruise, TOW, Chaparral, Phalanx, Standard Missile, AMRAAM, Titan, Peacekeeper, Trident D-5, HARM, and Tomahawk.</p> <p>Industrial Planning cost element -- MPC 6000: Provides for identification, analysis, and limited pilots and/or pathfinders for problems, constraints, essential and endangered capabilities in the industrial base sectors (space/ballistic missile and air launched munitions). Collection and maintenance of industrial data supports affordable acquisition and sustainability requirements.</p> <p><b>FY 2001 Program Justification</b>  Program is ongoing -- funds the continuation of Industrial Facilities and Industrial Planning activities as described in the description above.</p>											
P-1 Shopping List Item No. 7										Budget Item Justification Exhibit P-40, page 1 of 2	

Exhibit P-5, Weapon System Cost Analysis										Date: February 2000		
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature		
Missile Procurement, Air Force, Budget Activity 02, Other Missiles, Item No. 7										Industrial Facilities		
Manufacturer's Name/Plant City/State Location										Subline Item		
Weapon System Cost Elements		Ident Code	Total Cost In Millions of Dollars									
			FY 1999			FY 2000			FY 2001			
			Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	
Airframe		A										
Propulsion		A										
Target Detection Device		A										
Guidance & Control		A										
Warhead		A										
Fuze		A										
Safe & Arm		A										
Engineering & Control		A										
Government Costs		A										
Other		A										
Subtotal Missile Hardware		A										
Capital Type Rehabilitation (MPC 3000)		A			0.272					0.000		0.000
Industrial Base Assessment (MPC 6000)		A			0.613					0.620		0.621
Environmental Compliance (MPC 7000)		A			1.350					1.367		1.373
TOTAL PROGRAM					2.235					1.987		1.994
<u>Comments</u>												

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)										DATE: FEBRUARY 2000	
<b>APPROP CODE/BA:</b> MPAF/MISSILE SUPPORT EQUIPMENT					<b>P-1 NOMENCLATURE:</b> MISSILE REPLACEMENT EQUIPMENT- OTHER (OVERVIEW)						
			FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005		
<b>QUANTITY</b>											
<b>COST</b> (in Thousands)			\$0	\$0	\$2,623	\$0	\$0	\$0	\$0	\$0	
<b>Description:</b> 1. This program funds replacement support equipment for air launched, tactical missile weapons systems. This equipment supports the following missile weapons systems: AIM-7, AIM-9, AIM-120, AGM-65, and AGM-88. Equipment procured provides for missile weapons systems maintenance and testing at organizational/intermediate levels and will replace support equipment worn out or damaged beyond economical repair, no longer supportable, and costly to maintain. Headquarters United States Air Force (HQ USAF), Air Force Materiel Command (AFMC), and Air Combat Command (ACC) jointly determine requirements based on established allowance standards.  2. FY01 funding re-establishes the Missile Replacement Equipment - Other P-1 Line to support existing ACC requirements. Items requested in FY01 are identified on the attached P-40a and are representative of items to be procured. Items procured during execution may change based on critical equipment needed to support Air Force mission requirements.											
					<b>P-1 ITEM NO:</b> 8		<b>PAGE NO:</b> 2 - 35		Page 1 of 1		

	P-1 ITEM NO: 8	PAGE NO: 2 - 35	Page 1 of 1
--	-------------------	--------------------	-------------



# UNCLASSIFIED

<b>BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)</b>				<b>DATE: FEBRUARY 2000</b>			
<b>APPROP CODE/BA:</b> MPAF/MISSILE SUPPORT EQUIPMENT				<b>P-1 NOMENCLATURE:</b> MISSILE REPLACEMENT EQUIPMENT- OTHER (OVERVIEW)			
<b>PROCUREMENT ITEMS</b>	<b>ID CODE</b>	<b>QTY.</b>	<b>COST</b>	<b>FY1999 QTY.</b>	<b>FY2000 COST</b>	<b>FY2001 QTY.</b>	<b>FY2001 COST</b>
ITEMS LESS THAN \$5 MILLION	A						\$2,623
<b>Totals:</b>							\$2,623
<b>Remarks:</b>							
				<b>PAGE NO:</b> 2 - 36		<b>Page 1 of 1</b>	

# UNCLASSIFIED

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)										DATE: FEBRUARY 2000	
APPROP CODE/BA:				P-1 NOMENCLATURE:							
MPAF/MISSILE SUPPORT EQUIPMENT				MISSILE ITEMS LESS THAN \$5 MILLION - OTHER							
QUANTITY		FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005			
COST (in Thousands)		\$0	\$0	\$2,623	\$0	\$0	\$0	\$0	\$0		
<p><b>Description:</b></p> <p>1. The "Items Less Than \$5 Million" line funds replacement support equipment for air launched, tactical missile weapons systems. This equipment supports the following missile weapons systems: AIM-7, AIM-9, AIM-120, AGM-65, and AGM-88. No individual procurement item in this category exceeds \$5 million.</p> <p>2. Items requested in FY01 are identified on the attached P-40a and are representative of items to be procured. Items procured during execution may change based on critical equipment needed to support Air Force mission requirements.</p> <p>3. Identification Code: A</p>											
P-1 ITEM NO: 8				PAGE NO: 2 - 37			Page 1 of 1				

**UNCLASSIFIED**

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A-IL)			DATE: FEBRUARY 2000			
APPROP CODE/BA: MPAF/MISSILE SUPPORT EQUIPMENT		P-1 NOMENCLATURE: MISSILE ITEMS LESS THAN \$5 MILLION - OTHER				
PROCUREMENT ITEMS		NSN	FY2001			
			QTY.	COST	QTY.	COST
FSC 4935	GUIDED MISSILE MAINTENANCE REPAIR AND CHECKOUT SPECIALIZED EQUIPMENT				13	\$2,291
FSC 4030	FITTINGS FOR ROPE, CABLE AND CHAIN				6	\$245
FSC 1450	GUIDED MISSILE REMOTE CONTROL SYSTEMS				5	\$87
<b>TOTALS:</b>						\$2,623

P-1 ITEM NO:  
8

PAGE NO:  
2 - 38

Page 1 of 1

**UNCLASSIFIED**

**UNCLASSIFIED**

**FY 2001 BUDGET REQUEST**

**BUDGET ACTIVITY 03 – MODIFICATION OF IN-SERVICE MISSILES**

**FEBRUARY 2000**

**UNCLASSIFIED**

**Page 3 - 0**

**UNCLASSIFIED**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

UNCLASSIFIED

Table of Contents

FY 2001 BUDGET REQUEST

MISSILE PROCUREMENT MODIFICATIONS, AIR FORCE

Section 1:	P-1M Modification Summary.....	1
Section 2:	P-1 Line Item Detail .....	9
Missile Modifications		
9	AGM129 .....	9
10	CALCM.....	11
11	AIM-9X .....	19
12	LGM-30.....	25
13	AGM-65 .....	39
14	AGM-86 .....	45
15	LGM118 .....	49
16	Mods Less Than \$5.0M .....	53

**UNCLASSIFIED**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

\*\*\* UNCLASSIFIED \*\*\*

# P-1M MODIFICATION REPORT - 01 PBR

02/25/2000

MISSILE	CLASS	MOD NR	MODIFICATION TITLE	PRIOR	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	FY-05	COST TO GO	TOTAL PROG.
AGM129	P	129001	SERVICE LIFE EXTE					3.8	4.0	4.3	4.5	9.9	26.6
		Z88888	REPROGRAMMINGS			2.9							2.9
TOTAL FOR CLASS P				0.0	0.0	2.9	0.0	3.8	4.0	4.3	4.5	9.9	29.5
TOTAL FOR MISSILE AGM129				0.0	0.0	2.9	0.0	3.8	4.0	4.3	4.5	9.9	29.5

3 - 1  
\*\*\* UNCLASSIFIED \*\*\*

Totals may not add due to rounding.



\*\*\* UNCLASSIFIED \*\*\*

# P-1M MODIFICATION REPORT - 01 PBR

02/25/2000

MISSILE CALCM	CLASS P	MOD NR	MODIFICATION TITLE	PRIOR	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	FY-05	COST TO GO	TOTAL PROG.
		1294	AGM-86B (NUC) TO	47.8	176.6								224.4
		1295	PRECISION GUIDAN	10.3	11.9								22.2
		1297	MHU-204 TRAILERS	3.4	3.6								7.0
		Z88888	REPROGRAMMINGS	-3.4	0.1								-3.3
TOTAL FOR CLASS P				58.0	192.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	250.3
TOTAL FOR MISSILE CALCM				58.0	192.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	250.3

3 - 2  
\*\*\* UNCLASSIFIED \*\*\*

Totals may not add due to rounding.

\*\*\* UNCLASSIFIED \*\*\*

## P-1M MODIFICATION REPORT - 01 PBR

02/25/2000

MISSILE	CLASS	MOD	MODIFICATION	PRIOR	EY-99	EY-00	EY-01	EY-02	EY-03	EY-04	EY-05	COST	TOTAL
AIM-9	P	NR	TITLE									IO GO	PROG.
		3479	SIDEWINDER AIM-9				28.4	51.4	67.4	83.0	70.0	846.1	1,146.4
TOTAL FOR CLASS P				0.0	0.0	0.0	28.4	51.4	67.4	83.0	70.0	846.1	1,146.4
TOTAL FOR MISSILE AIM-9				0.0	0.0	0.0	28.4	51.4	67.4	83.0	70.0	846.1	1,146.4

3 - 3

\*\*\* UNCLASSIFIED \*\*\*

Totals may not add due to rounding.

\*\*\* UNCLASSIFIED \*\*\*

# P-1M MODIFICATION REPORT - 01 PBR

02/25/2000

MISSILE	CLASS	MOD	MODIFICATION	PRIOR	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	FY-05	COST	TOTAL
LGM-30	P-S	T5036	REMOVAL OF MESP	11.6	3.3	2.0	0.0					IO GO	PROG.
TOTAL FOR CLASS P-S													
LGM-30	P	13503B	MM III GUIDANCE R	168.1	103.1	181.6	187.3	182.8	196.4	190.4	191.7	321.4	1,722.8
		3413	REACT	332.5	1.0	0.0							333.5
		5053	MM III PROPULSION			84.7	139.4	252.3	259.2	265.9	260.7	559.3	1,821.5
		5062	IPD PROCESSOR U	1.3	0.5								1.7
		51302B	EXPLOSIVE SET CIR	1.8	0.2								2.0
		5716	MODIFICATION TO	2.7	0.0								2.7
		5735	ICBM CODE PROCE	4.6	0.0								4.6
		5739	ENVIRONMENTAL C						17.0	45.1	56.2	145.8	264.1
		5747	EC TRAINER HAC/R							3.5	0.0		3.5
		5768	PSRE LIFE EXTENSI						9.0	20.4	20.7	79.5	129.6
		5910	MINUTEMAN MEEC				48.1	43.5	8.8	6.7	5.8		112.9
		99999X	LOW COST MODIFIC	13.9	2.3	0.8	0.3	0.5	1.1	1.1	1.0		21.1
		Z88888	REPROGRAMMINGS	0.2	0.1	7.8							8.0
TOTAL FOR CLASS P													
				525.1	107.2	274.9	375.1	479.1	491.4	533.1	536.2	1,106.0	4,428.1
TOTAL FOR MISSILE LGM-30													
				536.7	110.4	276.9	375.1	479.1	491.4	533.1	536.2	1,106.0	4,445.0

3 - 4  
\*\*\* UNCLASSIFIED \*\*\*

Totals may not add due to rounding.

\*\*\* UNCLASSIFIED \*\*\*

# P-1M MODIFICATION REPORT - 01 PBR

02/25/2000

MISSILE	CLASS	MOD NR	MODIFICATION TITLE	PRIOR	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	FY-05	COST IO GO	TOTAL PROG.
AGM-65	P	650001	AGM-65 G TO K CON	7.8	2.9	2.8	2.0	1.0	0.4	0.4	0.3		17.6
		650002	AGM-65 B TO H UPG			11.5							11.5
		Z88888	REPROGRAMMINGS			0.7							0.7
TOTAL FOR CLASS P				7.8	2.9	15.0	2.0	1.0	0.4	0.4	0.3	0.0	29.8
TOTAL FOR MISSILE AGM-65				7.8	2.9	15.0	2.0	1.0	0.4	0.4	0.3	0.0	29.8

3 - 5  
\*\*\* UNCLASSIFIED \*\*\*

Totals may not add due to rounding.

# P-1M MODIFICATION REPORT - 01 PBR

MISSILE	CLASS	MOD	MODIFICATION	PRIOR	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	FY-05	COST	TOTAL
AGM-86	P	NR	TITLE									TO GO	PROG.
		860001	AGM-86B SERVICE L				4.1	8.7	15.0	23.4	23.8	27.2	102.2
<b>TOTAL FOR CLASS P</b>				0.0	0.0	0.0	4.1	8.7	15.0	23.4	23.8	27.2	102.2
<b>TOTAL FOR MISSILE AGM-86</b>				0.0	0.0	0.0	4.1	8.7	15.0	23.4	23.8	27.2	102.2

3-6  
\*\*\* UNCLASSIFIED \*\*\*

**Totals may not add due to rounding.**

\*\*\* UNCLASSIFIED \*\*\*

# P-1M MODIFICATION REPORT - 01 PBR

02/25/2000

MISSILE	CLASS	MOD NR	MODIFICATION TITLE	PRIOR	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	FY-05	COST TO GO	TOTAL PROG.
LGM118	P	5755	MK 21 RV RADIO FR	3.3	5.1	8.2							16.6
		99999X	LOW COST MODIFIC	2.0	0.5		0.1						2.6
		Z88888	REPROGRAMMINGS	0.1	0.5	0.6							1.3
TOTAL FOR CLASS P				5.5	6.2	8.8	0.1	0.0	0.0	0.0	0.0	0.0	20.5
TOTAL FOR MISSILE LGM118				5.5	6.2	8.8	0.1	0.0	0.0	0.0	0.0	0.0	20.5

3 - 7  
\*\*\* UNCLASSIFIED \*\*\*

Totals may not add due to rounding.

\*\*\* UNCLASSIFIED \*\*\*

# P-1M MODIFICATION REPORT - 01 PBR

02/25/2000

MISSILE OTHER	CLASS P	MOD NR	MODIFICATION TITLE	PRIOR	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	FY-05	COST IO GO	TOTAL PROG.
		99999Z	MISCELLANEOUS L	6.3		0.1	0.1						6.5
		Z88888	REPROGRAMMINGS		0.2	0.0							0.2
TOTAL FOR CLASS P				6.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	6.7
TOTAL FOR MISSILE OTHER				6.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	6.7

3 - 8  
\*\*\* UNCLASSIFIED \*\*\*

Totals may not add due to rounding.

## UNCLASSIFIED

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)										DATE February 2000
APPROPRIATION/BUDGET ACTIVITY MISSILE PROCUREMENT-AIR FORCE/Missile Modifications					P-1 ITEM NOMENCLATURE: ACM Mods					
	1999	2000	2001	2002	2003	2004	2005			
<b>COST (In Mil)</b>	\$0.000	\$2.920	\$0.000	\$3.777	\$4.050	\$4.324	\$4.510			

The overall goal of the budgeted modification is to extend operational capability of this weapons system.

MOD NR	MODIFICATION TITLE	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	FY-05	COST TO GO	TOTAL PROG.
P 129001	SERVICE LIFE EXTENSI				3.8	4.0	4.3	4.5	9.9	26.6
Z88888	REPROGRAMMINGS	2.9								2.9
TOTAL FOR CLASS P		0.0	2.9	0.0	3.8	4.0	4.3	4.5	9.9	29.5
TOTAL FOR MISSILE AGM129		0.0	2.9	0.0	3.8	4.0	4.3	4.5	9.9	29.5

Totals may not add due to rounding.

	P-1 SHOPP LIST ITEM NO. 09	PAGE NO. 1
--	-------------------------------	---------------



**THIS PAGE INTENTIONALLY LEFT BLANK**

## UNCLASSIFIED

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)		P-1 ITEM NOMENCLATURE: CALCM					DATE February 2000
APPROPRIATION/BUDGET ACTIVITY MISSILE PROCUREMENT-AIR FORCE/Missile Modifications							
COST (In Mil)	1999	2000	2001	2002	2003	2004	2005
	\$192.261	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000

This line item funds modifications of the AGM-86B, Air Launched Cruise Missile and AGM-86C, Conventional Air Launched Cruise Missile (CALCM). These are accurate long range cruise missiles optimized for an air-to-surface conventional role. This weapon system provides a near-term capability to attack high value point targets from outside theater defenses. There are no mods budgeted in FY01.

CLASS P	MOD NR	MODIFICATION TITLE	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	FY-05	COST TO GO	TOTAL PROG.
	1294	AGM-86B (NUC) TO AG	176.6								224.4
	1295	PRECISION GUIDANCE	11.9								22.2
	1297	MHU-204 TRAILERS	3.6								7.0
	Z88888	REPROGRAMMINGS	0.1								0.1
TOTAL FOR CLASS P			192.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	253.6
TOTAL FOR MISSILE CALCM			192.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	253.6

Totals may not add due to rounding.

	P-1 SHOPP LIST ITEM NO. 10	PAGE NO. 1
--	-------------------------------	---------------

02/25/2000

FY 2001 PBR

Modification Title and No: AGM-86B (NUC) TO AGM-86C (CONV) MISSILE MN-1294

Models of Missiles Affected: AGM-86B

UNCLASSIFIED

MODIFICATION OF MISSILE

Center: OC-ALC - Tinker AFB Okla City, OK

Exhibit P3A Congressional  
Appropriation: Missile Procurement, Air Force  
Class P  
CLC: CALCM

PE 0207323F Team POWER

**Description/Justification**

This modification converts the AGM-86B Air Launched Cruise Missile (ALCM) from nuclear to a Conventional Air Launched Cruise Missile (CALCM) configuration. Modification replaces the nuclear warhead with a conventional explosive filled warhead, incorporates a 3rd generation global positioning system (GPS) precision (GRIU/P) and anti-jam capability into the guidance system, and enhances producibility. The program objective is to expeditiously meet Air Combat Command's (ACCs) near term requirement to provide the B-52H aircraft with a long range standoff conventional missile. This program is a continuation of previous ALCM to CALCM effort. The last 50 missiles will be converted to the AGM-86D Penetrator variant with funding provided by the Defense Threat Reduction Agency (DTRA). GFP funding is required to ship missiles (ALCMs) to Boeing and provides funding for maintenance, test sets and fueling units at Boeing and Aerojet facilities.

FY99 funds reflect a supplemental plus up of \$126M.

Missile Breakdown: Active 522, Reserve 0, ANG 0

**Development Status**

N/A

**Projected Financial Plan**

RDTE&E (3600)

**PROCUREMENT (3020)**

INSTALL KITS

KITS NONRECUR

EQUIPMENT

EQUIP NONREC

CHANGE ORDERS

DATA

SIM/TRAINER

SUPPORT-EQUIP

MOD OF SPARES

SETA

GFP

INSTALLATION OF HARDWARE

FY-95 100 KITS

FY-96 64 KITS

FY-97 36 KITS

FY-99 322 KITS

TOTAL INSTALL

TOTAL COST (BP-2100)

(Totals may not add due to rounding)

	PRIOR	FY-99	FY-00	FY-01	FY-02	FY-03
	QTY	COST	QTY	COST	QTY	COST
200	32.5	322				
86.1						
27.2						
18.4						
1.1						
0.6						
0.1						
0.4						
1.6						
4.1						
40.8						
[200]		[322]				
[100]						
[64]						
[36]						
[272]						
[50]						
200			272		50	
322						176.6

UNCLASSIFIED

	FY-04		FY-05		TO COMP		TOTAL	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST
RDT&E (3600)								
PROCUREMENT (3020)								
INSTALL KITS					522	118.6		
KITS NONRECUR						37.0		
EQUIPMENT						19.5		
EQUIP NONREC								
CHANGE ORDERS								
DATA								
SIM/TRAINER					[1]	0.6		
SUPPORT-EQUIP						0.1		
MOD OF SPARES						0.4		
SETA						5.7		
GFP					[522]	42.4		
INSTALLATION OF HARDWARE								
FY-95 100 KITS					[100]			
FY-96 64 KITS					[64]			
FY-97 36 KITS					[36]			
FY-99 322 KITS					[322]			
TOTAL INSTALL					522			
TOTAL COST (BP-2100)					522	224.4		

(Totals may not add due to rounding)

Method of Implementation: CONTRACTOR FACILITY

Initial Lead Time: 15 Months

Follow-On Lead Time: 8 Months

Milestones

	FY-95	FY-96	FY-97	FY-98	FY-99	FY-00	FY-01
Contract Date (Month/CY)	06/95	06/96	06/97		04/99		
Delivery Date (Month/CY)	09/96	02/97	02/98		12/99		

Installation Schedule

	FY-95	FY-96	FY-97	FY-98	FY-99	FY-00	FY-01
Quarters	1	2	3	4	1	2	3
Input				26	20	44	26
Output				26	20	24	24

02/25/2000

FY 2001 PBR

Modification Title and No: PRECISION GUIDANCE MN-1295

Models of Missiles Affected: AGM-86C

UNCLASSIFIED  
MODIFICATION OF MISSILE

Center: OC-ALC - Tinker AFB Okla City, OK

Exhibit P3A Congressional  
Appropriation: Missile Procurement, Air Force  
Class P  
CLC: CALCM

PE 0207323F Team POWER

**Description/Justification**

The modification retrofits the current AGM-86C Conventional Air-Launched Cruise Missile (CALCM) Block 0/1 fleet with a 3rd generation GPS receiver and a robust GPS anti-jam system. When complete, the retrofit provides CALCM with precision level all weather, day/night navigation accuracy that is ensured against the world-wide proliferation of GPS jammers. Result for the warfighter is an expanded CALCM target set and a significant increase in CALCM efficiency, with the ability to employ CALCM without regard to the GPS jamming environment.

Missile Breakdown: Active 163, Reserve 0, ANG 0

**Development Status**

N/A

**Projected Financial Plan**

RDT&E (3600)

PROCUREMENT (3020)

INSTALL KITS

KITS NONRECUR

EQUIPMENT

EQUIP NONREC

CHANGE ORDERS

DATA

SIM/TRAINER

SUPPORT-EQUIP

SOFTWARE

INTEGRATION

TOTAL COST (BP-2100)

(Totals may not add due to rounding)

	PRIOR		FY-99		FY-00		FY-01		FY-02		FY-03	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST
28	6.1	135	10.1									
1.9			0.1									
2.3												
28			135									
11.9												

(Continued)

UNCLASSIFIED

Fact Sheet: CALCM MN-1295 PRECISION GUIDANCE  
(Continued)

	FY-04		FY-05		TO COMP		TOTAL	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST
RDTE&E (3600)								
PROCUREMENT (3020)								
INSTALL KITS					163		163	16.2
KITS NONRECUR								1.9
EQUIPMENT								0.1
EQUIP NONREC								
CHANGE ORDERS								
DATA								
SIM/TRAINER								0.2
SUPPORT-EQUIP								2.8
SOFTWARE								1.0
INTEGRATION								
TOTAL COST (BP-2100)					163		163	22.2

(Totals may not add due to rounding)

Method of Implementation: ORG/INTERMEDIATE

Initial Lead Time: 18 Months

Follow-On Lead Time: 15 Months

**Milestones**

	FY-97	FY-98	FY-99	FY-00	FY-01	FY-02
Contract Date (Month/CY)	04/97		04/99			
Delivery Date (Month/CY)	10/98		07/00			

02/25/2000

FY 2001 PBR

Modification Title and No: MHU-204 TRAILERS MN-1297

Models of Missiles Affected: AGM-86

UNCLASSIFIED  
MODIFICATION OF MISSILE

Center: SA-ALC Kelly AFB, San Antonio, TX

Exhibit P3A Congressional  
Appropriation: Missile Procurement, Air Force  
CLC: CALCM Class P

PE 0207323F Team POWER

**Description/Justification**

This modification supports the modification of MHU-196 Munitions Lift Trailers (MLT) to MHU-204 Munition Lift Trailer (MLT) configuration. Modification allows MHU-204 to be utilized on B-52 and B-1 aircraft in support of handling and transportation of weapons and missiles on Common Strategic Rotary Launchers (CSRLs) and enhances logistics supportability through trailer parts commonality. This modification also improves trailer maintainability and enhances/extends the trailer service life.

Missile Breakdown: Active 27, Reserve 0, ANG 0

**Development Status**

None

**Projected Financial Plan**

RDT&E (3600)

PROCUREMENT (3020)

INSTALL KITS

KITS NONRECUR

EQUIPMENT

EQUIP NONREC

CHANGE ORDERS

DATA

SIM/TRAINER

SUPPORT-EQUIP

INSTALLATION OF HARDWARE

FY-98 13 KITS

FY-99 14 KITS

TOTAL INSTALL

PRIOR	FY-99	FY-00	FY-01	FY-02	FY-03
QTY	COST	QTY	COST	QTY	COST

13	2.5	14	1.8		
	0.8		1.8		

[4]	[8]	[1]	[7]	
4	8	8	7	

13	3.4	14	3.6	
----	-----	----	-----	--

TOTAL COST (BP-2100)  
(Totals may not add due to rounding)

(Continued)

UNCLASSIFIED

Fact Sheet: CALCM MN-1297 MHU-204 TRAILERS  
(Continued)

	FY-04		FY-05		TO COMP		TOTAL	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST
RDTE&E (3600)								
PROCUREMENT (3020)								
INSTALL KITS					27	4.3		
KITS NONRECUR						2.6		
EQUIPMENT								
EQUIP NONREC								
CHANGE ORDERS								
DATA								
SIM/TRAINER								
SUPPORT-EQUIP								
INSTALLATION OF HARDWARE								
FY-98 13 KITS							[13]	
FY-99 14 KITS							[14]	
TOTAL INSTALL							27	
TOTAL COST (BP-2100)							27	7.0

(Totals may not add due to rounding)

Method of Implementation: CONTRACTOR FACILITY

Initial Lead Time: 12 Months

Follow-On Lead Time: 12 Months

**Milestones**

	FY-98	FY-99	FY-00	FY-01	FY-02	FY-03
Contract Date (Month/CY)	05/98	05/99				
Delivery Date (Month/CY)	05/99	05/00				

**Installation Schedule**

	FY-98	FY-99	FY-00	FY-01	FY-02	FY-03
Quarters	1	2	3	4	1	2
Input	2	3	4	1	2	3
Output	3	4	1	2	3	4



**THIS PAGE INTENTIONALLY LEFT BLANK**

## UNCLASSIFIED

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)								DATE February 2000
APPROPRIATION/BUDGET ACTIVITY MISSILE PROCUREMENT-AIR FORCE/Missile Modifications			P-1 ITEM NOMENCLATURE: AIM-9X Mods					
COST (In Mil)	1999	2000	2001	2002	2003	2004	2005	
	\$0.000	\$0.000	\$28.428	\$51.410	\$67.353	\$83.014	\$70.047	

This line item funds modifications of already fielded AIM-9M Sidewinder short range air-to-air missiles to the AIM-9X configuration. The AIM-9X is a long term evolution of the AIM-9 family of missiles. The AIM-9X configuration provides an improved missile seeker and increased kinematic performance while utilizing current hardware to the maximum extent possible.

CLASS P	MOD NR 3479	MODIFICATION TITLE SIDEWINDER AIM-9X M	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	FY-05	COST IO GO	TOTAL PROG.
			0.0	0.0	28.4	51.4	67.4	83.0	70.0	846.1	1,146.4
TOTAL FOR CLASS P											
			0.0	0.0	28.4	51.4	67.4	83.0	70.0	846.1	1,146.4
TOTAL FOR MISSILE AIM-9											

Totals may not add due to rounding.

	P-1 SHOPP LIST ITEM NO. 11	PAGE NO. 1
--	-------------------------------	---------------

02/25/2000

FY 2001 PBR

Modification Title and No: SIDEWINDER AIM-9X MODS MN-3479

Models of Missiles Affected:

UNCLASSIFIED  
MODIFICATION OF MISSILE

Center: AAC Eglin AFB

Exhibit P3A Congressional  
Appropriation: Missile Procurement, Air Force  
CLC: AIM-9  
Class P

PE 0207161F Team AIR

**Description/Justification**

The AIM-9X (Sidewinder) short range air-to-air missile is a long-term evolution of the AIM-9 series of missiles, a fielded system, qualifying this as a research category operational systems development. The AIM-9X missile modification program provides a launch and leave, air combat munition that uses passive infrared (IR) energy for acquisition and tracking of enemy aircraft and complements the Advanced Medium Range Air-to-Air Missile. Air superiority in the short-range air-to-air missile arena is essential and includes first shot, first kill opportunity against an enemy employing IR countermeasures. The AIM-9X employs several components common with the AIM-9M. Anti-Tamper features will be incorporated to protect improvements inherent in this design. AIM-9X is an Acquisition Category ID (ACAT-ID) joint-service program with a Navy lead. The Air Force share of the total program delivers 5,097 missiles of which 1,100 are Captive Air Training Missiles (CATMs).

**NOTES:**

This P3A reflects the entire development effort. Previous P3As were developed only for the reporting years to FY05.

The following notes apply to the Projected Financial Plan, Milestones, and Installation Schedule. All FY04 and beyond data are estimates.

**Projected Financial Plan**

- INSTALL KITS - cost includes teardown and shipping of GFE components plus all contractor costs associated with modification and delivery of AIM-9X All Up Rounds (AURs) and CATMs

- KITS NONRECUR - funds in FY03 support requalification of an AIM-9 rocket motor component manufacturer

- MISC - funds are for System Engineering and Program Management (SEPM)

- MISC - funds in FY02 of \$5.399M includes \$2.235M that will be reallocated in POM 02 for additional prime contractor and vendor costs incurred due to the loss of FY00 procurement funding

-- MISC - fund in FY03 of \$13.742M includes \$5.60M required for launcher modifications to relocate AIM-9M fin retention clips to accommodate AIM-9X, \$5.60M will be reallocated in POM 02 to support PL31 objectives and \$100K to support additional prime contractor and vendor costs

- SEEK EAGLE (PE 0207590) - the following quantities are required to support the Seek Eagle program: FY01- 9, FY02 - 17, FY03 - 6, and FY05 - 9

- The difference between TOTAL INSTALL and INSTALLATION QTY is the number of CATMs

**Milestones**

- Contract award and delivery dates reflect loss of FY00 procurement funding

Installation Schedule

- Input - Delivery of components to the contractor for All Up Rounds (AUR)

- Output - Delivery of AURs and CATMs

Missile Breakdown: Active 5097, Reserve 0, ANG 0

**Development Status**

The AIM-9X program has developed two restructuring efforts since the submission of FY00 President's Budget. The Jul 99 restructure resulted from the eight month delay in the flight test program and moved full rate production (MS III) from FY02 to FY03, changed the original FY02 full rate procurement into a third LRIP, and adjusted completion of the OT-IIB period while maintaining a FY02 Required Assets Availability (RAA) date. The second restructure was due to the Appropriations Conference zeroing of FY00 procurement funding. This moves the LRIP I contract award into FY01, slips FRP award into FY04 and slips RAA date into FY03. The program is on track to meet LRIP entry criteria in Aug 00. The flight test program has completed three guided firings demonstrating improved capabilities over the fielded AIM-9M

**Projected Financial Plan**

	PRIOR	FY-99	FY-00	FY-01	FY-02	FY-03
	QTY	COST	QTY	COST	QTY	COST
RDT&E (3600)	99.2	49.3	40.5	21.7	3.5	4.8

(Continued)

UNCLASSIFIED

Fact Sheet: AIM-9 MN-3479 SIDEWINDER AIM-9X MODS

**Projected Financial Plan Continued**

	PRIOR		FY-99		FY-00		FY-01		FY-02		FY-03	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST
PROCUREMENT (3020)												
INSTALL KITS					56	15.2	182	32.9	269	42.4		
KITS NONRECUR										2.5		
EQUIPMENT						2.7		2.3		2.0		
EQUIP NONREC												
CHANGE ORDERS												
DATA						0.8	1.3	0.1	0.2	0.9		
SIM/TRAINER						0.0	0.1	0.1	3.1	0.1		
SUPPORT-EQUIP						1.6	1.6	2.3	0.4	13.7		
TOOLING						3.5	5.4	5.3		1.9		
MISC						1.7						
SEEK EAGLE						2.9						
INSTALLATION OF HARDWARE												
FY-01	56	KITS									[44]	
FY-02	182	KITS									[28]	
FY-03	269	KITS										
FY-04	383	KITS										
FY-05	296	KITS										
FY-06	304	KITS										
FY-07	300	KITS										
FY-08	300	KITS										
FY-09	325	KITS										
FY-10	350	KITS										
FY-11	327	KITS										
FY-12	275	KITS										
FY-13	275	KITS										
FY-14	280	KITS										
FY-15	281	KITS										
FY-16	294	KITS										
FY-17	300	KITS										
FY-18	300	KITS										
TOTAL INSTALL							12			72		
TOTAL COST (BP-2100)					56	28.4	182	51.4	269	67.4		

(Totals may not add due to rounding)

(Continued)

UNCLASSIFIED

Fact Sheet: AIM-9 MN-3479 SIDEWINDER AIM-9X MODS  
(Continued)

	FY-04		FY-05		TO COMP		TOTAL	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST
RDT&E (3600)		16.5		5.8				241.4
PROCUREMENT (3020)								
INSTALL KITS	383	74.5	296	56.9	3,911	733.6	5,097	955.5
KITS NONRECUR								2.5
EQUIPMENT		1.2		1.1		2.6		11.9
EQUIP NONREC								
CHANGE ORDERS		1.5		1.1		21.4		27.0
DATA		0.2		0.1		1.6		2.1
SIM/TRAINER		0.2		0.3		0.6		1.5
SUPPORT-EQUIP		0.5		0.9				7.6
TOOLING		0.5		1.3		18.7		26.8
MISC		4.5		4.0		67.6		96.9
SEEK EAGLE				4.3				14.5
INSTALLATION OF HARDWARE								
FY-01 56 KITS							[56]	
FY-02 182 KITS		[154]					[182]	
FY-03 269 KITS		[68]		[201]			[269]	
FY-04 383 KITS				[138]			[383]	
FY-05 296 KITS					[245]		[296]	
FY-06 304 KITS					[296]		[304]	
FY-07 300 KITS					[304]		[300]	
FY-08 300 KITS					[300]		[300]	
FY-09 325 KITS					[325]		[325]	
FY-10 350 KITS					[350]		[350]	
FY-11 327 KITS					[327]		[327]	
FY-12 275 KITS					[275]		[275]	
FY-13 275 KITS					[275]		[275]	
FY-14 280 KITS					[280]		[280]	
FY-15 281 KITS					[281]		[281]	
FY-16 294 KITS					[294]		[294]	
FY-17 300 KITS					[300]		[300]	
FY-18 300 KITS					[300]		[300]	
TOTAL INSTALL	222		339		4,452		5,097	
TOTAL COST (BP-2100)	383	83.0	296	70.0	3,911	846.1	5,097	1146.4

(Totals may not add due to rounding)

Method of Implementation: CONTRACTOR FACILITY

Initial Lead Time: 21 Months

Follow-On Lead Time: 18 Months

(Continued)

## Milestones

[illegible]

## Installation Schedule

[illegible]

**THIS PAGE INTENTIONALLY LEFT BLANK**

## UNCLASSIFIED

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)						DATE February 2000
APPROPRIATION/BUDGET ACTIVITY MISSILE PROCUREMENT-AIR FORCE/Missile Modifications			P-1 ITEM NOMENCLATURE: Minuteman III Mods			
	1999	2000	2001	2002	2003	2004
						2005
COST (In Mil)	\$110.445	\$276.881	\$375.129	\$479.075	\$491.417	\$533.132
						\$536.154

This line item funds modifications to the LGM-30 Minuteman III missile propulsion, communications, and guidance systems. The Minuteman III is a strategic, ballistic missile capable of delivering special weapons against a full range of targets. The overall goal of the modifications budgeted in FY01 is to extend the operational capability of the Minuteman ICBM through 2020 by replacing the guidance and propulsion systems. The specific modifications budgeted and programmed are below.

CLASS P-S	MOD NR	MODIFICATION TITLE	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	FY-05	COST TO GO	TOTAL PROG. 16.9
		REMOVAL OF MESP LIT	3.3	2.0	0.1	0.0	0.0	0.0	0.0	0.0	16.9
TOTAL FOR CLASS P-S											
P	13503B	MM III GUIDANCE REPL	103.1	181.6	187.3	182.8	196.4	190.4	191.7	321.4	1,722.8
	3413	REACT	1.0	0.1							333.5
	5053	MM III PROPULSION RE		84.7	139.4	252.3	259.2	265.9	260.7	559.3	1,821.5
	5062	IPD PROCESSOR UNIT	0.5								1.7
	51302B	EXPLOSIVE SET CIRCU	0.2								2.0
	5716	MODIFICATION TO UPG	0.1								2.7
	5735	ICBM CODE PROCESSI	0.1								4.6
	5739	ENVIRONMENTAL CON					17.0	45.1	56.2	145.8	264.1
	5747	EC TRAINER HAC/RMP						3.5	0.1		3.5
	5768	PSRE LIFE EXTENSION					9.0	20.4	20.7	79.5	129.6
	5910	MINUTEMAN MEECN M			48.1	43.5	8.8	6.7	5.8		112.9
	99999X	LOW COST MODIFICATI	2.3	0.8	0.3	0.5	1.1	1.1	1.0		21.1
	Z88888	REPROGRAMMINGS	0.1	7.8							8.0
TOTAL FOR CLASS P			107.4	275.0	375.1	479.1	491.4	533.1	536.2	1,106.0	4,428.1

Totals may not add due to rounding.

P-1 SHOPP LIST ITEM NO. 12	PAGE NO. 1
-------------------------------	---------------



**BUDGET ITEM JUSTIFICATION  
(EXHIBIT P-40)**

**DATE** February 2000

APPROPRIATION/BUDGET ACTIVITY				P-1 ITEM NOMENCLATURE: Minuteman II/III Mods				
MISSILE PROCUREMENT-AIR FORCE/Missile Modifications								
COST (In Mil)		1999	2000	2001	2002	2003	2004	2005
		\$110.445	\$276.881	\$375.129	\$479.075	\$491.417	\$533.132	\$536.154

This line item funds modifications to the LGM-30 Minuteman III missile propulsion, communications, and guidance systems. The Minuteman III is a strategic, ballistic missile capable of delivering special weapons against a full range of targets. The overall goal of the modifications budgeted in FY01 is to extend the operational capability of the Minuteman ICBM through 2020 by replacing the guidance and propulsion systems. The specific modifications budgeted and programmed are below.

CLASS	MOD NR	MODIFICATION TITLE	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	FY-05	COST TO GO	TOTAL PROG.
TOTAL FOR MISSILE LGM-30											
			110.6	277.0	375.2	479.1	491.4	533.1	536.2	1,106.0	4,445.0

**Totals may not add due to rounding.**

P-1 SHOPP LIST ITEM NO. 12		PAGE NO. 2
-------------------------------	--	---------------

02/25/2000

FY 2001 PBR

Modification Title and No: MM III GUIDANCE REPLACEMENT PROGRAM MN-13503B

Models of Missiles Affected: LGM-30G

UNCLASSIFIED

MODIFICATION OF MISSILE

Exhibit P3A Congressional

Appropriation: Missile Procurement, Air Force

CLC: LGM-30

Center: OO-ALC - Hill AFB, UT

PE 0101213F

Team SPACE

### Description/Justification

The Minuteman (MM) III flight computer and platform electronics are showing early signs of degradation in several different areas. The MM III guidance electronics are expected to degrade. Procurement funds replace the flight computer amplifier, missile guidance system control, platform electronics and rehosts associated software. Support equipment and trainers will be upgraded or replaced to support the new guidance electronics. Beginning in FY00, the installation methodology for full rate production units will change to organizational/intermediate. Total wafer integration will be accomplished at the contractor facility, with installation to be accomplished by the field upon delivery of fully integrated wafer.

Execution of Full Rate Production (FRP) will be under the ICBM Prime Integration Contract (IPIC). GRP production cost elements are described to the level of detail specified under the new Total System Performance Responsibility (TSPR) contract.

Missile Breakdown: Active 652, Reserve 0, ANG 0

### Development Status

Complete

### Projected Financial Plan

	PRIOR	FY-99	FY-00	FY-01	FY-02	FY-03
	QTY	COST	QTY	COST	QTY	COST
RDT&E (3600)		534.4	9.5			
PROCUREMENT (3020)						
INSTALL KITS						
KITS NONRECUR	44	167.8	39	102.6	65	175.8
EQUIPMENT				80	180.6	80
EQUIP NONREC						175.9
CHANGE ORDERS				5.1	5.8	5.9
DATA						6.0
SIM/TRAINER						
SUPPORT-EQUIP						
OGC		0.4	0.6	0.7	0.9	1.0
TOTAL COST (BP-2100)	44	168.1	39	103.1	65	181.6
(Totals may not add due to rounding)					80	187.3
					80	182.8
					80	196.4

(Continued)

UNCLASSIFIED

Fact Sheet: LGM-30 MN-13503B MM III GUIDANCE REPLACEMENT PROGRAM

(Continued)

	FY-04		FY-05		TO COMP		TOTAL	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST
RDTE&E (3600)								543.9
PROCUREMENT (3020)								
INSTALL KITS								
KITS NONRECUR								
EQUIPMENT	80	183.2	80	184.5	104	306.9	652	1666.6
EQUIP NONREC								
CHANGE ORDERS		6.2		6.3		10.8		46.1
DATA								
SIM/TRAINER								
SUPPORT-EQUIP								
OGC		1.0		0.9		3.7		10.1

TOTAL COST (BP-2100) 80 190.4 80 191.7 104 321.4 652 1722.8  
(Totals may not add due to rounding)

Method of Implementation: ORG/INTERMEDIATE

Initial Lead Time: 30 Months Follow-On Lead Time: 19 Months

Milestones

	FY-93	FY-94	FY-95	FY-96	FY-97	FY-98	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	FY-05	FY-06	FY-07
Contract Date (Month/CY)				09/96	12/96	03/98	12/98	12/99	11/00	11/01	11/02	11/03	11/04	11/05	11/06
Delivery Date (Month/CY)				03/99	06/99	09/00	06/01	07/01	06/02	06/03	06/04	06/05	06/06	06/07	06/08
Contract Date (Month/CY)	FY-08	FY-09													
Delivery Date (Month/CY)	11/07	11/08													
Contract Date (Month/CY)	06/09	06/10													
Delivery Date (Month/CY)															

02/25/2000

FY 2001 PBR

Modification Title and No: MM III PROPULSION REPLACEMENT PROGRAM MN-5053

Models of Missiles Affected: LGM-30

UNCLASSIFIED

MODIFICATION OF MISSILE

Center: OO-ALC - Hill AFB, UT

Exhibit P3A Congressional  
Appropriation: Missile Procurement, Air Force  
CLC: LGM-30 Class P

PE 0101213F Team SPACE

**Description/Justification**

Remanufactures all solid-fuel stages, booster ordnance and software of Minuteman (MM) III fleet. This corrects identified mission threatening degradations, sustains existing reliability, and supports MM III life extension efforts. The program is required, as stated in ACC MNS CAF 318-92, due to age-related degradation such as motor case liner debonding, propellant cracking and propagation, and case corrosion that may lead to less than acceptable performance of the MM III booster system. Remanufacture must begin in FY00 to allow replacement of operational motors prior to age-out and thus reliability deterioration. Installation of assembled boosters will be accomplished in the field as part of the field activity.

This modification has a negotiated fixed price incentive contract with successive targets. As a result of awarding PRP procurement to the IPIC, many cost elements once defined separately are now rolled up into a unit cost under the new TSPR concept.

Missile Breakdown: Active 607, Reserve 0, ANG 0

**Development Status**

Hardware PDR: Oct 96; Software PDR: Dec 97; Hardware CDR: Jun 98; Software CDR: Sep 98; MS III/FRP: Oct 00; FAD Mar 01; IOC: Jan 02

**Projected Financial Plan**

	PRIOR		FY-99		FY-00		FY-01		FY-02		FY-03	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST
RD&E (3600)		239.8		60.6		29.6						
PROCUREMENT (3020)												
INSTALL KITS												
KITS NONRECUR			9	80.0	33	129.6	86	234.5	96	239.6		
EQUIPMENT												
EQUIP NONREC				2.3		3.4		5.2		4.5		
CHANGE ORDERS												
DATA												
SIM/TRAINER												
SUPPORT-EQUIP												
OGC				2.4		6.5		12.6		15.0		
TOTAL COST (BP-2100)			9	84.7	33	139.4	86	252.3	96	259.2		

(Totals may not add due to rounding)

(Continued)

UNCLASSIFIED

Fact Sheet: LGM-30 MN-5053 MM III PROPULSION REPLACEMENT PROGRAM

(Continued)

	FY-04		FY-05		TO COMP		TOTAL	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST
RDT&E (3600)								330.0
PROCUREMENT (3020)								
INSTALL KITS								
KITS NONRECUR								
EQUIPMENT	96	246.0	96	240.7	191	504.0	607	1674.4
EQUIP NONREC								
CHANGE ORDERS		3.6		3.6		23.2		45.8
DATA								
SIM/TRAINER								
SUPPORT-EQUIP								
OGC		16.3		16.4		32.1		101.3

TOTAL COST (BP-2100) 96 265.9 96 260.7 191 559.3 607 1821.5  
(Totals may not add due to rounding)

Method of Implementation: ORG/INTERMEDIATE

Initial Lead Time: 12 Months

Follow-On Lead Time: 12 Months

Milestones

	FY-94	FY-95	FY-96	FY-97	FY-98	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	FY-05	FY-06	FY-07
Contract Date (Month/CY)							01/00	01/01	01/02	01/03	01/04	01/05	01/06	01/07
Delivery Date (Month/CY)							01/01	01/02	01/03	01/04	01/05	01/06	01/07	01/08

02/25/2000

FY 2001 PBR

Modification Title and No: MINUTEMAN MEECN MODIFICATION MN-5910

Models of Missiles Affected: LGM-30

UNCLASSIFIED

MODIFICATION OF MISSILE

Center: ESC - Hanscom AFB, MA

Exhibit P3A Congressional  
Appropriation: Missile Procurement, Air Force  
Class P  
CLC: LGM-30

PE 0303131F Team SPACE

#### Description/Justification

The Minimum Essential Emergency Communications Network (MEECN) project will provide reliable, secure, and survivable communications in both the Very Low Frequency/Low Frequency (VLF/LF) and Extremely High Frequency (EHF) bands for the command and control of Minuteman ICBM forces. These command and control upgrades will be installed in the Minuteman Launch Control Centers (LCC). This communications modification is required to meet redundancy standards established by national security directives.

The VLF/LF effort will replace the Survivable Low Frequency Communications System (SLFCS) with a modern VLF/LF capability that includes High Data Rate (HIDAR). HIDAR is a Joint Staff-directed effort to provide a fast and interoperable MEECN mode. SLFCS is outmoded equipment that is rapidly becoming unsupportable.

The EHF effort is focused on replacing the satellite-based, ground communication links of the Minuteman ICBM forces. It supplants the ICBM Super High Frequency (SHF) Satellite Terminal (ISST) receipt, (currently providing force direction/execution), and the Ultra High Frequency (UHF) report-back links. ISST relies upon the Single Channel Transponder (SCT) package aboard the Defense Satellite Communications System (DSCS). Extending the use of SCT aboard DSCS is not practical and the SCT will not be flown on DSCS after 2003. The UHF links depend upon the Air Force Satellite Communications (AFSATCOM) packages hosted aboard the Fleet Satellite Communications (FLTSATCOM) satellites. FLTSATCOM satellites are past their life expectancy.

Because of the determined operational need to have the system fielded by FY03 and ensure we are capable of meeting CJCS requirements, minimal R&D work is required in FY01 and will be completed in early 2Q FY 01. Procurement is projected for early 3Q FY01.

Missile Breakdown: Active 53, Reserve 0, ANG 0

#### Development Status

ICBM Launch Control Center (LCC) VLF/LF effort was contractually combined with the MEECN EHF effort. The combined program is referred to as the Minuteman MEECN Program (MMP). The ICBM Prime Integrating Contract (through OO-ALC) is being used as a contracting vehicle. Preliminary Design Review was Jul 99. Critical Design Review is scheduled for Oct 99. Milestone III is scheduled for Jan 01. RDT&E funds in FY02-05 support recurring engineering. Intent is to ZBT to APPN. 3020.

#### Projected Financial Plan

	PRIOR	FY-99	FY-00	FY-01	FY-02	FY-03
	QTY	COST	QTY	COST	QTY	COST
RDT&E (3600)						
PROCUREMENT (3020)						
INSTALL KITS						
KITS NONRECUR						
EQUIPMENT						
EQUIP NONREC						
CHANGE ORDERS						
DATA						
SIM/TRAINER						
SUPPORT-EQUIP						
REFURB OF EMD ASSETS						
COMPUTER BASED						
TRAINER						
MAINT TRAINER						
OGC						
SPARES						
ICS						

Page 12 -5

3 - 31

UNCLASSIFIED

(Continued)

UNCLASSIFIED

Fact Sheet: LGM-30 MN-5910 MINUTEMAN MEECN MODIFICATION

**Projected Financial Plan Continued**

	PRIOR		FY-99		FY-00		FY-01		FY-02		FY-03	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST
INSTALLATION OF HARDWARE												
FY-01 31 KITS							[23]	3.7	[8]	1.3		
FY-02 22 KITS									[14]	2.3	[8]	1.3
TOTAL INSTALL							23	3.7	22	3.5	8	1.3
TOTAL COST (BP-2100)							31	48.1	22	43.5		8.8

(Totals may not add due to rounding)

(Continued)

UNCLASSIFIED

Fact Sheet: LGM-30 MN-5910 MINUTEMAN MEECN MODIFICATION  
(Continued)

	FY-04		FY-05		TO COMP		TOTAL	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST
RD&E (3600)		0.3		0.3			[4]	70.3
PROCUREMENT (3020)								
INSTALL KITS								
KITS NONRECUR							53	49.6
EQUIPMENT								
EQUIP NONREC								
CHANGE ORDERS								
DATA								
SIM/TRAINER							[12]	6.0
SUPPORT-EQUIP								
REFURB OF EMD ASSETS							[4]	2.0
COMPUTER BASED							[19]	1.5
TRAINER								
MAINT TRAINER							[3]	3.5
OGC								15.1
SPARES								4.0
ICS		6.7		5.8				22.7
INSTALLATION OF HARDWARE								
FY-01 31 KITS							[31]	5.0
FY-02 22 KITS							[22]	3.5
TOTAL INSTALL							53	8.5
TOTAL COST (BP-2100)		6.7		5.8			53	112.9

(Totals may not add due to rounding)

Method of Implementation: CONTRACT FIELD TEAM

Initial Lead Time: 5 Months

Follow-On Lead Time: 5 Months

**Milestones**

	FY-99	FY-00	FY-01	FY-02	FY-03
Contract Date (Month/CY)			01/01	01/02	
Delivery Date (Month/CY)			06/01	06/02	

**Installation Schedule**

	FY-99	FY-00	FY-01	FY-02	FY-03
Quarters	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
Input			5 18 8	4 10 8	
Output			5 18 8	4 10 8	



02/25/2000

FY 2001 PBR

Modification Title and No: LOW COST MODIFICATIONS MN-99999X

Models of Missiles Affected: LGM-30G

UNCLASSIFIED  
MODIFICATION OF MISSILE

Center: OO-ALC - Hill AFB, UT

Exhibit P3A Congressional  
Appropriation: Missile Procurement, Air Force  
CLC: LGM-30 Class P

PE 0101213F Team SPACE

**Description/Justification**

These are low cost (under \$900k each) which are necessary to meet mission requirements and reduce logistics support costs. Included in this line is Modification to Upgrade the Power ECS Trainers & LFT D-box Relay (Mod # 5719).

Missile Breakdown: Active 0, Reserve 0, ANG 0

**Development Status**

N/A.

**Projected Financial Plan**

	PRIOR		FY-99		FY-00		FY-01		FY-02		FY-03	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST
RDT&E (3600)												
PROCUREMENT (3020)												
INSTALL KITS												
KITS NONRECUR												
EQUIPMENT												
EQUIP NONREC												
CHANGE ORDERS												
DATA												
SIM/TRAINER												
SUPPORT-EQUIP												
MISC												
	13.9		2.3		0.8		0.3		0.5		1.1	
TOTAL COST (BP-2100)	13.9		2.3		0.8		0.3		0.5		1.1	
(Totals may not add due to rounding)												

(Continued)

UNCLASSIFIED

Fact Sheet: LCM-30 MN-99999X LOW COST MODIFICATIONS

(Continued)

	FY-04		FY-05		TO COMP		TOTAL	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST
RDTE&E (3600)								
PROCUREMENT (3020)								
INSTALL KITS								
KITS NONRECUR								
EQUIPMENT								
EQUIP NONREC								
CHANGE ORDERS								
DATA								
SIM/TRAINER								
SUPPORT-EQUIP								
MISC		1.1		1.0				21.1
TOTAL COST (BP-2100)		1.1		1.0				21.1

(Totals may not add due to rounding)

Method of Implementation: ORG/INTERMEDIATE

Initial Lead Time: 0 Months

Follow-On Lead Time: 0 Months

**Milestones**

FY-92

Contract Date (Month/CY)

Delivery Date (Month/CY)

Center: OO-ALC - Hill AFB, UT

## UNCLASSIFIED

(Continued)

UNCLASSIFIED

Fact Sheet: LGM-30 MN-T5036 REMOVAL OF MESP LITHIUM BATTERIES

(Continued)

	FY-04		FY-05		TO COMP		TOTAL	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST
RD&E (3600)								
PROCUREMENT (3020)								
INSTALL KITS								
KITS NONRECUR								0.3
EQUIPMENT							[274]	1.3
EQUIP NONREC								
CHANGE ORDERS								
DATA								0.0
SIM/TRAINER							[1]	0.1
SUPPORT-EQUIP								0.0
OGC								14.3
INSTALLATION OF HARDWARE								
FY-92 0 KITS							[166]	0.6
FY-93 0 KITS							[108]	0.3
TOTAL INSTALL							274	0.9
TOTAL COST (BP-2100)								16.9

(Totals may not add due to rounding)

Method of Implementation: DEPOT

Initial Lead Time: 2 Months

Follow-On Lead Time: 2 Months

Milestones

	FY-92	FY-93	FY-94	FY-95
Contract Date (Month/CY)	01/93	12/93		
Delivery Date (Month/CY)	03/93	02/94		

Installation Schedule

	FY-92		FY-93		FY-94		FY-95	
Quarters	1	2	3	4	1	2	3	4
Input					55	58	32	21
Output					55	58	32	21

**THIS PAGE INTENTIONALLY LEFT BLANK**

## UNCLASSIFIED

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)						DATE February 2000
APPROPRIATION/BUDGET ACTIVITY MISSILE PROCUREMENT-AIR FORCE/Missile Modifications			P-1 ITEM NOMENCLATURE: Maverick Mods			
	1999	2000	2001	2002	2003	2004
						2005
COST (In Mil)	\$2.926	\$14.999	\$2.042	\$0.968	\$0.386	\$0.385
						\$0.288

This line item funds modifications to the AGM-65D/G Maverick missiles. The AGM-65D/G Maverick are rocket propelled, air-to-surface, precision guided tactical missiles with a "stand off" launch and leave capability. The primary modification in FY01 is to fix deficiencies in the seeker. The specific modification budgeted and programmed is below.

CLASS	MOD NR	MODIFICATION TITLE	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	FY-05	COST TO GO	TOTAL PROG.
P	650001	AGM-65 G TO K CONVE	2.9	2.8	2.0	1.0	0.4	0.4	0.3		17.6
	650002	AGM-65 B TO H UPGRA		11.5							11.5
	Z88888	REPROGRAMMINGS		0.7							0.7
TOTAL FOR CLASS P			2.9	15.0	2.0	1.0	0.4	0.4	0.3	0.0	29.8
TOTAL FOR MISSILE AGM-65			2.9	15.0	2.0	1.0	0.4	0.4	0.3	0.0	29.8

Totals may not add due to rounding.

	P-1 SHOPP LIST ITEM NO. 13	PAGE NO. 1
--	-------------------------------	---------------

02/25/2000

FY 2001 PBR

Modification Title and No: AGM-65 G TO K CONVERSION MN-650001

Models of Missiles Affected: AGM-65 G Maverick

UNCLASSIFIED  
MODIFICATION OF MISSILEExhibit P3A Congressional  
Appropriation: Missile Procurement, Air Force  
Class P  
CLC: AGM-65

Center: AAC Eglin AFB

PE 0207313F Team POWER

**Description/Justification**

The AGM-65/K Maverick Program allows ACC to retain an electro-optical Maverick capability with greatly increased reliability well into the next century. The AGM-65/K missile is a restructuring of the R&M 2000 Maverick Program which has already passed an AFOTEC QOT&E program. The program converts AGM-65G infrared (IR) Mavericks into the AGM-65K missile with an electro-optical (TV) seeker. This phase of the program will fix deficiencies identified in the QOT&E effort and prepare for quantity production. The missile's circuit cards will be modified to eliminate cuts and jumpers that were used on the circuit cards in the prototype units. Fixing these deficiencies will improve the reliability and effectiveness of the missile. Credit will be received from providing 1200 obsolete AGM-65 A&B guidance and control sections (GCS), with an estimated worth of over \$45 million, to Raytheon Missile System Company. These early AGM-65 seekers are past their useful service life and are no longer operationally effective.

Missile Breakdown: Active 1200, Reserve 0, ANG 0

**Development Status**

N/A

**Projected Financial Plan**

	PRIOR	FY-99		FY-00		FY-01		FY-02		FY-03	
		QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST
RDT&E (3600)											
PROCUREMENT (3020)											
INSTALL KITS				200	0.8	200	0.7	200	0.5	200	
KITS NONRECUR	7.1		2.8		0.5						
EQUIPMENT											
EQUIP NONREC					0.5						
CHANGE ORDERS											
DATA											
SIM/TRAINER											
SUPPORT-EQUIP					0.6		0.7				
FLT TEST	0.1				0.2		0.2		0.2		0.2
CONTRACT SUPPORT	0.2				0.2		0.1		0.2		0.2
PMA	0.4		0.1		0.2		0.3		0.1		
TRAINING											
INSTALLATION OF HARDWARE											
FY-00 200 KITS						[50]		[150]		[150]	
FY-01 200 KITS								[50]			[50]
FY-02 200 KITS											
FY-03 200 KITS											
FY-04 200 KITS											
FY-05 200 KITS											
TOTAL INSTALL						50		200		200	
TOTAL COST (BP-2100)	7.8		2.9	200	2.8	200	2.0	200	1.0	200	0.4

(Totals may not add due to rounding)

Fact Sheet: AGM-65 MN-650001  
(Continued)

	FY-04		FY-05		TO COMP		TOTAL	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST
<b>RDT&amp;E (3600)</b>								
<b>PROCUREMENT (3020)</b>								
INSTALL KITS	200		200				1,200	2.0
KITS NONRECUR								10.4
EQUIPMENT								0.5
EQUIP NONREC								
CHANGE ORDERS								
DATA								
SIM/TRAINER								
SUPPORT-EQUIP								
FLT TEST								0.7
CONTRACT SUPPORT		0.2		0.2				0.7
PMA		0.2		0.1				1.4
TRAINING								1.5
<b>INSTALLATION OF HARDWARE</b>								0.4
FY-00 200 KITS							[200]	
FY-01 200 KITS							[200]	
FY-02 200 KITS	[150]						[200]	
FY-03 200 KITS	[50]		[150]				[200]	
FY-04 200 KITS			[50]				[200]	
FY-05 200 KITS							[200]	
<b>TOTAL INSTALL</b>	200		200				1,200	
<b>TOTAL COST (BP-2100)</b>	200	0.4	200	0.3			1,200	17.6

(Totals may not add due to rounding)

### Method of Implementation: CONTRACTOR FACILITY

**Initial Lead Time: 21 Months**

**Follow-On Lead Time: 15 Months**

## Milestones

	<u>FY-98</u>	<u>FY-99</u>	<u>FY-00</u>	<u>FY-01</u>	<u>FY-02</u>	<u>FY-03</u>	<u>FY-04</u>	<u>FY-05</u>	<u>FY-06</u>	<u>FY-07</u>
Contract Date (Month/CY)	08/98		02/00	05/01	05/02	05/03	05/04	05/05		
Delivery Date (Month/CY)	05/00		08/01	08/02	08/03	08/04	08/05	08/06		

### **Installation Schedule**

file	FY-98				FY-99				FY-00				FY-01				FY-02				FY-03				FY-04				FY-05			
	Quarters	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
		Input																														
		Output																														
	FY-06				FY-07																											
Quarters	1	2	3	4	1	2	3	4																								
Input	50	50	50	50	50	50	50	50																								
Output	50	50	50	50	50	50	50	50																								



02/25/2000

FY 2001 PBR

Modification Title and No: AGM-65 B TO H UPGRADES MN-650002

Models of Missiles Affected: AGM-65B Maverick

UNCLASSIFIED  
MODIFICATION OF MISSILE

Center: AAC Eglin AFB

Exhibit P3A Congressional  
Appropriation: Missile Procurement, Air Force  
CLC: AGM-65 Class P

PE 0207313F Team POWER

**Description/Justification**

The AGM-65H Maverick program is part of a restructuring of the R&M 2000 Maverick Program which has already passed an AFOTEC QOT&E program. This program upgrades AGM-65B Mavericks to the AGM-65H missile with an improved electro-optical (TV) seeker. The missile's circuit cards will be modified to eliminate cuts and jumpers that were used on the circuit cards in the prototype units and to correct some deficiencies identified in QOT&E testing. Repairing these deficiencies will improve the reliability and effectiveness of the missile and will allow ACC to retain an electro-optical Maverick capability with greatly increased reliability well into the next century.

This Modification was Congressional directed and is not a new start.

Missile Breakdown: Active 391, Reserve 0, ANG 0

**Development Status**

N/A.

**Projected Financial Plan**

	PRIOR		FY-99		FY-00		FY-01		FY-02		FY-03	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST
RDT&E (3600)												
PROCUREMENT (3020)												
INSTALL KITS					391	8.6						
KITS NONRECUR					[391]	1.6						
EQUIPMENT												
EQUIP NONREC												
CHANGE ORDERS												
DATA						0.4						
SIM/TRAINER												
SUPPORT-EQUIP						0.8						
INSTALLATION OF HARDWARE												
FY-00 391 KITS					[250]				[141]			
TOTAL INSTALL					250				141			
TOTAL COST (BP-2100)					391	11.5						

(Totals may not add due to rounding)

(Continued)

UNCLASSIFIED

Fact Sheet: AGM-65 MN-650002 AGM-65 B TO H UPGRADES  
(Continued)

	FY-04		FY-05		TO COMP		TOTAL	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST
RD&E (3600)								
PROCUREMENT (3020)								
INSTALL KITS					391	8.6		
KITS NONRECUR					[391]	1.6		
EQUIPMENT								
EQUIP NONREC								
CHANGE ORDERS								
DATA						0.4		
SIM/TRAINER								
SUPPORT-EQUIP						0.8		
INSTALLATION OF HARDWARE								
FY-00 391 KITS							[391]	
TOTAL INSTALL							391	
TOTAL COST (BP-2100)							391	11.5

(Totals may not add due to rounding)

Method of Implementation: CONTRACTOR FACILITY

Initial Lead Time: 1 Month

Follow-On Lead Time: 0 Months

Milestones

FY-00 FY-01  
Contract Date (Month/CY) 12/99  
Delivery Date (Month/CY) 01/00

Installation Schedule

	FY-00				FY-01			
Quarters	1	2	3	4	1	2	3	4
Input		250				141		
Output				250				141

Page 13 -4

3 - 43

UNCLASSIFIED

**THIS PAGE INTENTIONALLY LEFT BLANK**

## UNCLASSIFIED

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)						DATE February 2000
APPROPRIATION/BUDGET ACTIVITY MISSILE PROCUREMENT-AIR FORCE/Missile Modifications			P-1 ITEM NOMENCLATURE: ALCM Mods			
	1999	2000	2001	2002	2003	2004
						2005
<b>COST (In Mil)</b>	\$0.000	\$0.000	\$4.066	\$8.650	\$14.991	\$23.403
						\$23.847

This line item funds modifications of the AGM-86B, Air Launched Cruise Missile, for conversion to the AGM-86C, Conventional Air Launched Cruise Missile (CALCM). The AGM-86C is an accurate long range cruise missile optimized for an air-to-surface conventional role. This weapon system provides a near-term capability to attack high value point targets from outside theater defenses.

CLASS P	MOD NR	MODIFICATION TITLE	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	FY-05	COST TO GO	TOTAL PROG.
	860001	AGM-86B SERVICE LIFE			4.1	8.7	15.0	23.4	23.8	27.2	102.2
TOTAL FOR CLASS P			0.0	0.0	4.1	8.7	15.0	23.4	23.8	27.2	102.2
TOTAL FOR MISSILE AGM-86			0.0	0.0	4.1	8.7	15.0	23.4	23.8	27.2	102.2

Totals may not add due to rounding.

	P-1 SHOPP LIST ITEM NO. 14	PAGE NO. 1
--	-------------------------------	---------------

02/25/2000

FY 2001 PBR

Modification Title and No: AGM-86B SERVICE LIFE EXTENSION PROGRAM MN-860001

Models of Missiles Affected: AGM-86B

UNCLASSIFIED

MODIFICATION OF MISSILE

Center: OC-ALC - Tinker AFB Okla City, OK

Exhibit P3A Congressional  
Appropriation: Missile Procurement, Air Force  
Class P  
CLC: AGM-86

PE 0101122F Team SPACE

#### Description/Justification

This program replaces the Inertial Navigation Element (INE) in the Air Launched Cruise Missile (ALCM) program. The original INE service life design expired in 1996. The components in the INE are out of production making it increasingly difficult to maintain or support. Due to component obsolescence, a redesign of the INE is required. The ALCM is currently in a Service Life Extension Program (SLEP). SLEP is necessary to extend the life of the ALCM weapon system to FY30. The program includes INE, Conventional Air Launched Cruise Missile (CALCM)/ALCM Test Instrumentation Kit (CATIK) payload doors and other test equipment replacement as well as Line Replaceable Unit (LRU) life-time buys and software rehosts. The cost associated with extension of weapon system service life until FY30, is consistent with the B-52H. This document reflects a combined procurement schedule for the Missile INE Replacement and Missile CATIK Program Modifications. This is not a new start modification.

Missile Breakdown: Active 847, Reserve 0, ANG 0

#### Development Status

This combined project is a subset of the ALCM SLEP. The ALCM SLEP is a continuing effort and is currently in Phase III Life Cycle Cost Analysis. The CATIK payload door contains a redesigned Joint Test Assembly (JTA) package and provides test assets for continued testing throughout the ALCM service life extension. The CATIK payload door is a critical component for determining Weapon System Reliability (WSR). The redesigned INE will utilize improved solid-state circuitry. INE replacement is critical to weapon system performance.

#### Projected Financial Plan

RDT&E (3600)

PROCUREMENT (3020)

INSTALL KITS

KITS NONRECUR

EQUIPMENT

EQUIP NONREC

CHANGE ORDERS

DATA

SIM/TRAINER

SUPPORT-EQUIP

OGC

TOTAL COST (BP-2100)

(Totals may not add due to rounding)

PRIOR	FY-99		FY-00		FY-01		FY-02		FY-03	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST
				5.3		6.5		6.4		5.3
			2	1.0	15	7.2			77	10.8
			[2]	0.1	[15]	0.7			[77]	2.3
				0.3						1.6
				0.3		0.4				
				2.1						
				0.3		0.4				0.3
			2	4.1	15	8.7	77	15.0		

(Continued)

UNCLASSIFIED

Fact Sheet: AGM-86 MN-860001 AGM-86B SERVICE LIFE EXTENSION PROGRAM

(Continued)

	FY-04		FY-05		TO COMP		TOTAL	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST
RDT&E (3600)								23.4
PROCUREMENT (3020)								
INSTALL KITS	187	17.3	272	16.1	294	18.2	847	70.5
KITS NONRECUR								
EQUIPMENT	[187]	5.2	[272]	7.4	[294]	8.3	[847]	24.0
EQUIP NONREC		0.4						2.3
CHANGE ORDERS		0.1		0.1		0.1		0.9
DATA								
SIM/TRAINER								2.1
SUPPORT-EQUIP								2.2
OGC		0.3		0.3		0.6		

TOTAL COST (BP-2100) 187 23.4 272 23.8 294 27.2 847 102.2  
(Totals may not add due to rounding)

Method of Implementation: ORG/INTERMEDIATE

Initial Lead Time: 16 Months

Follow-On Lead Time: 16 Months

**Milestones**

	FY-00	FY-01	FY-02	FY-03	FY-04	FY-05	FY-06	FY-07	FY-08	FY-09
Contract Date (Month/CY)		05/01	10/01	10/02	10/03	10/04	10/05	10/06	10/07	
Delivery Date (Month/CY)		09/02	02/03	02/04	02/05	02/06	02/07	02/08	02/09	

**THIS PAGE INTENTIONALLY LEFT BLANK**

## UNCLASSIFIED

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)						DATE February 2000
APPROPRIATION/BUDGET ACTIVITY MISSILE PROCUREMENT-AIR FORCE/Missile Modifications			P-1 ITEM NOMENCLATURE: Peacekeeper Mods			
	1999	2000	2001	2002	2003	2004
						2005
COST (In Mil)	\$6.159	\$8.791	\$0.099	\$0.000	\$0.000	\$0.000

This line item funds modifications to the LGM-118A, Peacekeeper missile. The LGM-118A Peacekeeper is a Multiple Independently Targetable Re-entry Vehicle Intercontinental Ballistic Missile capable of delivering special weapons on multiple strategic targets.

CLASS	MOD	MODIFICATION	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	FY-05	COST	TOTAL
P	NB	TITLE								TO GO	PROG.
5755		MK 21 RV RADIO FREQ	5.1	8.2							16.6
9999X		LOW COST MODIFICATI	0.5		0.1						2.6
Z88888		REPROGRAMMINGS	0.5	0.6							1.3
TOTAL FOR CLASS P			6.2	8.8	0.1	0.0	0.0	0.0	0.0	0.0	20.5
TOTAL FOR MISSILE LGM118			6.2	8.8	0.1	0.0	0.0	0.0	0.0	0.0	20.5

Totals may not add due to rounding.

	P-1 SHOPP LIST ITEM NO. 15	PAGE NO. 1
--	-------------------------------	---------------



02/25/2000

FY 2001 PBR

Modification Title and No: MK 21 RV RADIO FREQUENCY (RF) SUBSYSTEM MODIFICATION MN-5755

Models of Missiles Affected: LGM-118

UNCLASSIFIED  
MODIFICATION OF MISSILE

Center: OO-ALC - Hill AFB, UT

Exhibit P3A Congressional  
Appropriation: Missile Procurement, Air Force  
CLC: LGM118

PE 0101215F Team SPACE

Description/Justification

The Reentry Vehicle (RV) Radio Frequency (RF) subsystem on the MK 21 RV currently exhibits degraded performance; namely high insertion loss. The MK 21 Mod 3 RF Subsystem Fault Investigation Report linked this high insertion loss to faulty RF cables and power splitters. This proposed RF subsystem modification will upgrade both the existing RF cable and power splitter designs and subsequently improve performance in proximity mode fuse operation. This mod extends the useful life of the MK 21 RV, which is identified for long-term use with the Minuteman (MM) III ICBM weapon system. The MK21 RV is the candidate for the Safety Enhanced Reentry Vehicle (SERV) program.

Missile Breakdown: Active 643, Reserve 0, ANG 0

Development Status

N/A.

Projected Financial Plan

RDT&E (3600)

PROCUREMENT (3020)

INSTALL KITS

KITS NONRECUR

EQUIPMENT

EQUIP NONREC

CHANGE ORDERS

DATA

SIM/TRAINER

SUPPORT-EQUIP

	PRIOR		FY-99		FY-00		FY-01		FY-02		FY-03	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST
	1	3.3	321	5.1	321	8.1						
						0.0						
						0.1						
TOTAL COST (BP-2100)	1	3.3	321	5.1	321	8.2						

(Totals may not add due to rounding)

UNCLASSIFIED

	FY-04		FY-05		TO COMP		TOTAL	
	QTY	COST	QTY	COST	QTY	COST	QTY	COST
RDT&E (3600)								
PROCUREMENT (3020)								
INSTALL KITS								
KITS NONRECUR							642	13.2
EQUIPMENT							1	3.3
EQUIP NONREC								0.0
CHANGE ORDERS								0.1
DATA								
SIM/TRAINER								
SUPPORT-EQUIP								
TOTAL COST (BP-2100)							643	16.6

(Totals may not add due to rounding)

Method of Implementation: ORG/INTERMEDIATE

Initial Lead Time: 15 Months Follow-On Lead Time: 18 Months

**Milestones**

	FY-98	FY-99	FY-00
Contract Date (Month/CY)	12/98	02/99	03/00
Delivery Date (Month/CY)	03/00	08/00	09/01

**THIS PAGE INTENTIONALLY LEFT BLANK**

## UNCLASSIFIED

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)		DATE February 2000				
APPROPRIATION/BUDGET ACTIVITY MISSILE PROCUREMENT-AIR FORCE/Missile Modifications		P-1 ITEM NOMENCLATURE: Mods Less Than \$5.0M				
	1999	2000	2001	2002	2003	2004
	\$0.217	\$0.095	\$0.099	\$0.000	\$0.000	\$0.000
COST (In Mil)						
						\$0.000
						\$0.000

This line item funds modifications that apply to multiple missile weapon systems. The overall goal of the modifications budgeted is to enhance capability, improve reliability and maintainability, and reduce logistics support costs. Less than 100K has been budgeted in FY01.

MOD NR	MODIFICATION TITLE	FY-99	FY-00	FY-01	FY-02	FY-03	FY-04	FY-05	COST TO GO	TOTAL PROG.
99999Z	MISCELLANEOUS LOW		0.1	0.1						6.5
Z88888	REPROGRAMMINGS	0.2	0.1							0.2
TOTAL FOR CLASS P		0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	6.7
TOTAL FOR MISSILE OTHER		0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	6.7

Totals may not add due to rounding.

	P-1 SHOPP LIST ITEM NO. 16	PAGE NO. 1
--	-------------------------------	---------------

**UNCLASSIFIED**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

**UNCLASSIFIED**

**FY 2001 BUDGET REQUEST**  
**BUDGET ACTIVITY 04 – SPARES AND REPAIR PARTS**  
**FEBRUARY 2000**

**UNCLASSIFIED**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Item Justification</b>										Date: February 2000
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										
<b>Missile Procurement, Air Force, Budget Activity 04, Spares and Repair Parts, Item No. 17</b>										<b>Initial and Replenishment Spares</b>
Program Element for Code B Items:		Other Related Program Elements:								N/A
ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total
A										
Proc Qty										
Total Proc Cost (\$ M)		46.749	17.889	44.026	64.685	22.134	21.542	7.619		224.644

**Description**

Missile Initial Spares (Budget Program 260000) and Replenishment Spares (Budget Program 250000)

**FY 2001 Program Justification**  
**MISSION AND DESCRIPTION**

Program Definition: MISSILE INITIAL SPARES (Budget Program 260000). The missile initial spares are required to support missile production and delivery schedules, missile spare engines, and other new missile investment spare items, including guidance and control sections. The new items may be in support of new production missiles or peculiar and common support equipment/training equipment.

Beginning in FY94, most of the initial spares will be procured using obligation authority in the Working Capital Funds (WCF). When the spares are delivered, this central procurement account will reimburse the WCF. Initial spares are funded in the two program segments described below.

Working Capital Funds (WCF) Spares. This program provides the initial pipeline or inventory for all new weapon system spares, which includes modifications, support equipment, consumables, Readiness Spares Package (RSP), New Acquisition Spares (NAS), and other production spares.

Exempt Spares. This program finances spares that are not purchased through the WCF. The budget authority is a direct cite on the contract. Examples include missile spare engines, Contractor Logistic Support (CLS), simulators/trainers, munitions, and classified spares.

FY01 Program Justification: The FY00 total missile spares request decreased due to Aerial Drones moving to 3010 (Procurement). Increase to FY01 thru FY05 missile initial spares account is due to new Minuteman modification & support initial spares. Funding for Aerial Drones appears in BP26000 for FY 98-99, and BP16000 from FY00-05.

Program Definition: MISSILE REPLENISHMENT SPARES (Budget Program 250000). The replenishment spares and repair parts are needed to support non-ballistic and ballistic missile systems and include such items as rocket motors, cables, telemetry packages, and electronic components.

FY01 Program Justification: The FY01 BP25 program funds for replenishment spares for the following: Air Launched Cruise Missile (\$0.255M), Minuteman III (\$9.402M), Peacekeeper (\$1.672M), Adv. Cruise Missile (\$0.321M), Tactical AIM Missiles (\$6.032M), HARM (\$2.798M), AMRAAM (\$0.234M), AGM-130 (\$0.971M), and Maverick (\$1.407M).



**UNCLASSIFIED**

<b>Exhibit P-5, Weapon System Cost Analysis</b>				Date: February 2000							
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number											
<b>Missile Procurement, Air Force, Budget Activity 04, Spares and Repair Parts, Item No. 17</b>				<b>Initial and Replenishment Spares</b>							
Manufacturer's Name/Plant City/State Location				Subline Item							
Weapon System Cost Elements		Ident Code	Total Cost In Millions of Dollars								
			FY 1999			FY 2000			FY 2001		
			Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
INITIAL SPARES (Budget Program 26)		A			8.272			5.746			20.934
REPLEN SPARES (Budget Program 25)		A			38.477			12.143			23.092
TOTAL PROGRAM					46.749			17.889			44.026
<b>Comments</b>											

UNCLASSIFIED

Exhibit P-18A, Initial Spare Funding		Date: February 2000				
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number						
Missile Procurement, Air Force, Budget Activity 04, Spares and Repair Parts, Item No. 17		Initial and Replenishment Spares				
Initial Spare Funding						
LINE	END ITEM NOMENCLATURE	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002
	WCF SPARES	0.070	5.486	5.146	10.574	11.543
	EXEMPT SPARES	1.425	2.786	0.600	10.360	7.582
	TOTAL INITIAL SPARES	1.495	8.272	5.746	20.934	19.125

## UNCLASSIFIED

Exhibit P-18A, Initial Spare Funding Summary				Date: February 2000		
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number						
Missile Procurement, Air Force, Budget Activity 04, Spares and Repair Parts, Item No.17				Initial and Replenishment Spares		
Initial Spare Funding Summary						
LINE	END ITEM NOMENCLATURE	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002
1	Advanced Cruise Missile	0.000	0.000	0.000	1.942	2.307
2	Air Launched Cruise MSL	0.000	0.000	0.000	0.000	0.000
3	Minuteman Squadrons	0.000	4.484	4.870	18.034	15.099
4	Tactical AIM Missile	0.000	0.107	0.684	0.820	1.600
5	ADV MED Range A/A MSL (Procurement)	1.057	0.725	0.192	0.138	0.119
6	Standoff Attack Weapon	0.000	0.169	0.000	0.000	0.000
7	AGM-86C Conventional ALCMS	0.000	2.614	0.000	0.000	0.000
8	Aerial Targets	0.438	0.173	0.000	0.000	0.000
	TOTAL INITIAL SPARES	1.495	8.272	5.746	20.934	19.125

Initial Spare Funding Summary  
Exhibit P-18A, page 4 of 5

UNCLASSIFIED

PAGE 4 - 4

**UNCLASSIFIED**

Exhibit P-18A, Replenishment Spare Funding Summary					Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number						
Missile Procurement, Air Force, Budget Activity 04, Spares and Repair Parts, Item No.17					Initial and Replenishment Spares	
Replenishment Spare Funding Summary						
LINE	END ITEM NOMENCLATURE	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002
1	AGM-142 HAVE NAP (0207322F)	1.447	1.227	0.000	0.000	0.000
2	AGM-129 Adv Cruise Msl (0101120F)	0.452	0.000	0.315	0.321	0.330
3	AGM-86 ALCM (0101122F)	0.173	0.092	0.213	0.255	0.255
4	LGM-30 Minuteman (0101213F)	17.943	22.489	1.520	9.402	32.786
5	LGM-118 Peacekeeper (0101215F)	1.742	0.112	0.559	1.672	0.663
6	AIM-7 Sparrow (0207161F)	2.600	0.302	2.590	2.563	2.701
7	AIM-9 Sidewinder (0207161F)	2.429	4.205	2.518	3.469	3.371
8	AGM-88A HARM (0207162F)	2.123	2.640	2.169	2.798	2.854
9	AIM-120 AMRAAM (0207163F)	0.000	5.196	0.327	0.234	0.240
10	AGM-130 (0207165F)	0.938	0.931	0.812	0.971	0.987
11	AGM-65D Maverick (0207313F)	1.138	1.283	1.120	1.407	1.373
12	QF-4 Drone (0305116F)	0.288	0.000	0.000	0.000	0.000
	TOTAL REPLENISHMENT SPARES	31.273	38.477	12.143	23.092	45.560

**UNCLASSIFIED**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

**UNCLASSIFIED**

**FY 2001 BUDGET REQUEST  
BUDGET ACTIVITY 05 – SPACE AND OTHER SUPPORT  
FEBRUARY 2000**

**UNCLASSIFIED      Page 5 - 0**

**UNCLASSIFIED**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Item Justification</b>										Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 18</b>										<b>Wideband Gapfiller Satellites (Space) Advance Procurement</b>	
Program Element for Code B Items:										PE 0603854F	
N/A										Other Related Program Elements:	
ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total	
A	0				378.353	205.720	50.898	12.217		3	
Cost (\$ M)					13.400					647.188	
Advance Proc Cost (\$ M)	0.000			25.736						39.136	
Weapon System Cost (\$ M)	0.000			25.736	391.753	205.720	50.898	12.217		686.324	
Initial Spares (\$ M)											
Total Proc Cost (\$ M)	0.000			25.736	391.753	205.720	50.898	12.217		686.324	
Flyaway Unit Cost (\$ M)											
Wpn Sys Unit Cost (\$ M)											
<p><b>Description</b></p> <p>Provide wideband communications to continue the Defense Satellite Communications System (DSCS) X-Band connectivity. The Wideband Gapfiller System (WGS) will also provide a new point-to-point service using the Ka-band frequency, and will host a broadcast capability similar to GBS Phase 2. Launches are scheduled for FY2004/2005 and the three satellite constellation will use maximum commercial practices and technology.</p> <p><b>FY 2001 Program Justification</b></p> <p>The FY01 program funds advanced parts buy for satellites 1, 2, and 3.</p>											
P-1 Shopping List Item No. 18										Budget Item Justification Exhibit P-40, page 1 of 3	



Exhibit P-10 p.1, Advance Procurement Requirements Analysis (Page 1 - Funding)										Date: February 2000		
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature		
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 18										Wideband Gapfiller Satellites (Space) Advance Procurement		
Weapon System WBd AP			First System Award Date			First System Completion Date						
			Oct-00			Nov-03						
(\$ in Millions)												
Description	PLT	When Rqd	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total
End Item Qty							2	1				3
CFE												
GFE												
EOQ						25.736	13.435					39.171
Design												
Term Liability												
TOTAL AP						25.736	13.435					39.171
<b>Description:</b>												
Advance Buy Payback Schedule:												
FY01 \$25.736M payback in FY02												
FY02 \$13.435M payback in FY03												

## UNCLASSIFIED

Exhibit P-10 p.2, Advance Procurement Requirements Analysis (Page 2 - Budget Justification)				Date: February 2000		
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number				P-1 Line Item Nomenclature		
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 18				Wideband Gapfiller Satellites (Space) Advance Procurement		
Weapon System WBd AP						
(TOA, \$ in Millions)						
Description	PLT	OPA	Unit Cost	FY 2001 QTY	FY 2001 Contract Forecast Date	FY 2001 Total Cost Request
End Item				3	Oct-00	25.736
CFE						
GFE						
EOQ				25,736	Oct-00	25.736
Design						
Term Liability						
TOTAL AP						25.736
<u>Description:</u>						
P-1 Shopping List Item No. 18				Advance Procurement Requirements Analysis (Page 2 - Budget Justification)		
UNCLASSIFIED				PAGE 5 - 3		

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Item Justification</b>									
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number									
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 19</b>									
Program Element for Code B Items:		N/A	Other Related Program Elements:				Spaceborne Equipment (0303140F)		
	ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
Proc Qty	A								
Total Proc Cost (\$ M)			9.201	4.532	9.765	9.251	9.311	9.481	9.677
									61.218

**Description**

The Air Force acquires and logistically supports the communication security (COMSEC) equipment used by the DOD satellite community to protect command and control uplinks and mission data downlinks. Through centralized funding and acquisition, all DOD satellite COMSEC requirements are consolidated into this single budget line item in order to minimize high production start-up costs, dilute high Non-recurring Engineering (NRE) costs, and provide some cost savings due to economy of scale. Space COMSEC equipment must perform without failure for as long as 10 years. Satellite program offices must have equipment for integration onboard satellites 3-5 years prior to vehicle launch. Acquisition strategies must accommodate the high cost, low quantity, and advanced need dates of satellite hardware. Customers include the entire DoD satellite community.

**FY 2001 Program Justification**

Funds the acquisition and life-cycle support for the following encryption/decryption systems in support of Global Positioning System (GPS), Space-Based Infrared System (SBIRS), and other Special Project Systems: KG-247 and KGT-207.

P-1 Shopping List Item No. 19	Budget Item Justification
<b>UNCLASSIFIED</b>	<b>Exhibit P-40, page 1 of 4</b>

Exhibit P-5, Weapon System Cost Analysis										Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 19										Spaceborne Equipment (COMSEC)	
Manufacturer's Name/Plant City/State Location										Subline Item	
Motorola, Chandler, AZ.											
Weapon System Cost Elements		Ident Code	Total Cost In Millions of Dollars								
			FY 1999			FY 2000			FY 2001		
			Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Airframe		A									
Propulsion		A									
Target Detection Device		A									
Guidance & Control		A									
Warhead		A									
Fuze		A									
Safe & Arm		A									
Engineering & Control		A									
Government Costs		A									
Other		A									
Subtotal Missile Hardware		A									
COMSEC BOX (KG-228)		A									
COMSEC BOX (KGT-207)		A	4		4.000					4.000	
COMSEC BOX (KGT-247)		A	4		4.000				9	0.000	9.000
Other Support Cost		A			1.201					0.886	0.853
Initial Spares		A			0.000					0.000	0.000
TOTAL PROGRAM					8.000					4.000	9.000
<b>Comments</b>											

P-1 Shopping List Item No. 19

Weapon System Cost Analysis  
Exhibit P-5, page 2 of 4

<b>Exhibit P-5A, Procurement History and Planning</b>	<b>Date: February 2000</b>
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number	P-1 Line Item Nomenclature
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 19</b>	<b>Spaceborne Equipment (COMSEC)</b>

Appropriation (Treasury) Code/CC/BAB/BSA/Item Control Number	P-1 Line Item Nomenclature
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 19</b>	<b>Spaceborne Equipment (COMSEC)</b>

**COMSEC**

WBS Cost Elements	Qty	Unit Cost	Location of PCO	RFP Issue Date	Contract Method	Contract Type	Contractor and Location	Award Date	Date of First Delivery	Specs Available Now?	Date Revisions Available?
KGT-207 (FY99)	4	1000000.000	NSA	Mar-95	MIPR	FFP	Motorola, Chandler, AZ.	Feb-99	Aug-99	Yes	
KGT-207 (FY00)	8	5000000.00	NSA	Feb-99	MIPR	FFP	Motorola, Chandler, AZ.	May-00	Aug-01	Yes	
KGT-247 (FY99)	4	1000000.000	NSA	Sep-00	MIPR	FFP	Motorola, Chandler, AZ.	Jun-99	Jan-02	Yes	
KGT-247 (FY01)	9	1000000.000	NSA	Sep-00	MIPR	FFP	Motorola, Chandler, AZ.	Dec-00	Apr-02	Yes	

1

**PAGE 5 - 7**

UNCLASSIFIED

## Exhibit P-21, Production Schedule

Date: February 2000

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

## Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 19

P-1 Line Item Nomenclature

## Spaceborne Equipment (COMSEC)

ITEM/MANUFACTURER/ PROCUREMENT YEAR	S E R V	PROC. QTY	ACCEP. PRIOR TO 1 OCT 1998	BALANCE DUE AS OF 1 OCT 1998	FISCAL YEAR 1999												FISCAL YEAR 2000												L	
					CALENDAR YEAR 1999												CALENDAR YEAR 2000													
					1998																									
					O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P		
KGT-207 (99)	USAF	4	0	4																										4
KGT-207 (00)	USAF	8	0	8																										8
KGT-247 (99)	USAF	4	0	4																										4
KGT-247 (01)	USAF	9	0	9																										9
TOTAL		25	0	25																										25
					PRODUCTION RATES						PROCUREMENT LEAD TIME																			
MANUFACTURER'S NAME	LOCATION	REACHED D+	MIN SUST	SHIFT HOURS DAYS	M A X	ADMIN LEAD TIME												MFG TIME	TOTAL AFTER 1 OCT											
						PRIOR 1 OCT						AFTER 1 OCT																		
						INITIAL																								
						REORDER																								
Motorola																														
REMARKS																														

P-1 Shopping List Item No. 19

Production Schedule

Exhibit P-21, page 4 of 4

UNCLASSIFIED

PAGE 5 - 8

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Item Justification</b>										<b>Date: February 2000</b>	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 20</b>										<b>Global Positioning System (Space)</b>	
Program Element for Code B Items:										GPS Block IIF 0604480F, GPS 0305165F (RDT&E, AF)	
Other Related Program Elements:											
	ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total
Proc Qty	A	55					3	3	3	33	97
Cost (\$ M)		873.873	87.837	125.400	196.937	192.935	371.348	329.431	282.278	3447.648	5907.687
Advance Proc Cost (\$ M)		898.417			13.404	42.494	38.871	33.457	32.951	63.997	1123.591
Weapon System Cost (\$ M)		1772.290	87.837	125.400	210.341	235.429	410.219	362.888	315.229	3511.645	7031.278
Initial Spares (\$ M)											
Total Proc Cost (\$ M)		1772.290	87.837	125.400	210.341	235.429	410.219	362.888	315.229	3511.645	7031.278
Flyaway Unit Cost (\$ M)											
Wpn Sys Unit Cost (\$ M)											
<b>Description</b>											
<p><b>MISSION AND DESCRIPTION:</b> The NAVSTAR Global Positioning System (GPS) fills validated Joint Service requirements for worldwide, accurate, common grid three-dimensional positioning/navigation for military aircraft, ships, and ground personnel. The consistent accuracy, unaffected by location or weather and available in real time, significantly improves effectiveness of reconnaissance, weapons delivery, mine countermeasures and rapid deployment for all Services. The system is composed of three segments: user equipment (funded under PE 0305164F), satellites and a control network. The satellites broadcast high-accuracy data using precisely synchronized signals which are received and processed by user equipment installed in military platforms. This equipment computes the platform position and velocity and provides steering vectors to target locations or navigation waypoints. The control segment updates the navigation messages broadcast from the satellites daily to maintain system precision in three dimensions to 16 meters spherical error probability worldwide. The satellites are currently launched on Delta, and will be launched on the Evolved Expendable Launch Vehicle (EELV) beginning with the Block IIF satellites. The system hosts the Nuclear Detonation Detection System (funded under PE 0305913F). The initial buy of 28 Block IIA satellites was awarded as a multiyear contract in September 1982 for a total of \$1.023 billion. A follow-on competitively awarded multiyear procurement of 20 Block IIR replenishment satellites plus one option satellite began in FY1991 and will complete with final delivery in FY2000. The acquisition strategy for the Block IIF satellites is a competitive multiyear contract for 6 satellites with advance buy in FY1996, and annual buys of three modernized satellites per year beginning in FY2003.</p> <p>The program has been restructured since the FY2000 President's Budget submission. Block IIF satellites 7 through 9 procurement was delayed by two years (FY2001 to FY2003) due to extended mean mission duration of Block IIA satellites currently on orbit. Modernization efforts that were to begin with Block IIF satellite #7 were accelerated to include 12 Block IIR and the first 6 Block IIF satellites. A 20 db spot beam antenna will also be incorporated starting with Block IIF satellite #7. This budget request assumes a \$67.5M FY2000 reprogramming action (\$18M procurement/\$45.5M RDT&amp;E).</p>											
<b>FY 2001 Program Justification</b>											
FY2001 funding continues on-orbit support for Block IIA and Block IIR (5) satellites. Production efforts to modernize the first 3 Block IIF and 12 Block IIR satellites also begins in FY01. Modernization includes changes to satellites and ground systems to accommodate new military and civil signals.											
P-1 Shopping List Item No. 20										<b>Budget Item Justification</b>	
										<b>Exhibit P-40, page 1 of 11</b>	



**UNCLASSIFIED**

Exhibit P-40A, Budget Item Justification for Aggregated Items										Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 20										Global Positioning System (Space)	
Procurement Items (\$M)	ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total
Block IIA	A	865.817	0.709	0.813	0.700	0.701	0.263	0.015	0.000	0.000	869.018
Quantity	A	28	0	0	0	0	0	0	0	0	28
	A										
Block IIR	A	653.141	48.101	45.513	78.034	86.942	74.756	44.508	40.460	25.704	1097.159
Quantity	A	21	0	0	0	0	0	0	0	0	21
	A										
Block IIF	A	253.332	39.027	79.074	131.607	147.786	335.200	318.365	274.769	3485.941	5065.101
Quantity	A	6	0	0	0	0	3	3	3	33	48
	A										
Total		1772.290	87.837	125.400	210.341	235.429	410.219	362.888	315.229	3511.645	7031.278

**Remarks**

To Complete' quantity includes 24 satellites beyond the current Block IIF contract as reported in the Selected Acquisition Report (SAR) which anticipates 3 satellites per year through 2016.

P-1 Shopping List Item No. 20	Budget Item Justification for Aggregated Items
Exhibit P-40A, page 2 of 11	

## UNCLASSIFIED

Exhibit P-5, Weapon System Cost Analysis										Date: February 2000				
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature				
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 20										Global Positioning System (Space)				
Manufacturer's Name/Plant City/State Location										Subline Item				
Boeing/Seal Beach/CA										Block IIF				
Weapon System Cost Elements		Ident Code	Total Cost In Millions of Dollars											
			FY 1999			FY 2000			FY 2001					
			Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
Quantity		A	0				0				0			
Flyaway Cost		A												
Hardware-Recurring		A												
Vehicle		A			6.702					43.659				84.251
Subtotal Recurring		A			6.702					43.659				84.251
Non-recurring & Ancillary Cost		A												
Tooling & Test Equipment		A			0.000					0.000				0.000
Subtotal Non-recurring		A			0.000					0.000				0.000
TOTAL FLYAWAY COST		A			6.702					43.659				84.251
Checkout & Launch		A												
Storage, Reactivation, & Transport		A			0.000					0.000				0.000
Integration and Checkout		A			0.000					1.500				2.500
Launch Services		A			5.065					5.525				2.008
Propellants		A			0.000					0.000				0.095
TOTAL CHECKOUT & LAUNCH COST		A			5.065					7.025				4.603
Support Cost		A												
Technical Support		A			21.120					23.684				24.036
Program Support		A			4.316					4.706				5.063
On-Orbit Support		A			1.824					0.000				0.250
Engineering Change Orders		A			0.000					0.000				0.000
TOTAL SUPPORT COST		A			27.260					28.390				29.349
Net P-1 Full Funding		A			39.027					79.074				118.203
Less Advance Procurement Cost (Prior Yr)		A			0.000					0.000				0.000
P-1 Shopping List Item No. 20										Weapon System Cost Analysis				
										Exhibit P-5, page 3 of 11				

UNCLASSIFIED

PAGE 5 - 11

Exhibit P-5, Weapon System Cost Analysis				Date: February 2000					
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number				P-1 Line Item Nomenclature					
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 20				Global Positioning System (Space)					
Weapon System Cost Elements		Ident Code	Total Cost In Millions of Dollars						
			FY 1999		FY 2000		FY 2001		
			Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	
Procurement Cost		A			39.027			79.074	118.203
Plus Advance Procurement (Current Yr)		A			0.000			0.000	13.404
TOTAL PROGRAM					39.027			79.074	131.607

**Hardware Recurring funding in FY01 includes modernization of IIF satellites 1-6.**

## UNCLASSIFIED

Exhibit P-5, Weapon System Cost Analysis				Date: February 2000			
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number				P-1 Line Item Nomenclature			
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 20				Global Positioning System (Space)			
Manufacturer's Name/Plant City/State Location				Subline Item			
Boeing North American/Seal Beach/CA				Block IIA			
Weapon System Cost Elements				Total Cost In Millions of Dollars			
	Ident Code	FY 1999			FY 2000		
		Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Quantity	A	0			0		
Flyaway Cost	A						
Hardware-Recurring	A						
Vehicle	A			0.709			0.700
Subtotal Recurring	A			0.709			0.700
Non-recurring & Ancillary Cost	A						
Tooling & Test Equipment	A			0.000			0.000
Subtotal Non-recurring	A			0.000			0.000
TOTAL FLYAWAY COST	A			0.709			0.700
Checkout & Launch	A						
Storage, Reactivation, & Transport	A			0.000			0.000
Integration and Checkout	A			0.000			0.000
Launch Services	A			0.000			0.000
Propellants	A			0.000			0.000
TOTAL CHECKOUT & LAUNCH COST	A			0.000			0.000
Support Cost	A						
Technical Support	A			0.000			0.000
Program Support	A			0.000			0.000
On-Orbit Support	A			0.000			0.000
Engineering Change Orders	A			0.000			0.000
TOTAL SUPPORT COST	A			0.000			0.000
Net P-1 Full Funding	A			0.709			0.700
Less Advance Procurement Cost (Prior Yr)	A			0.000			0.000
P-1 Shopping List Item No. 20				Weapon System Cost Analysis			
				Exhibit P-5, page 5 of 11			

<b>Exhibit P-5, Weapon System Cost Analysis</b>							Date: February 2000				
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number							P-1 Line Item Nomenclature				
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 20</b>							<b>Global Positioning System (Space)</b>				
Total Cost In Millions of Dollars											
Weapon System Cost Elements	Ident Code	FY 1999		FY 2000		FY 2001					
		Qty	Total Unit Cost	Total Cost	Qty	Total Unit Cost	Total Cost	Qty	Total Unit Cost	Total Cost	
Procurement Cost	A			0.709			0.813				0.700
Plus Advance Procurement (Current Yr)	A			0.000			0.000				0.000
TOTAL PROGRAM				0.709			0.813				0.700
<b>Comments</b>											

**Weapon System Cost Analysis**  
 Exhibit P-5, page 6 of 11

[illegible]

UNCLASSIFIED

## Exhibit P-21, Production Schedule

Date: February 2000

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

P-1 Line Item Nomenclature

## Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 20

## Global Positioning System (Space)

ITEM/MANUFACTURER/ PROCUREMENT YEAR	S E R V	PROC. QTY	ACCEP. PRIOR TO 1 OCT 1998	BALANCE DUE AS OF 1 OCT 1998	FISCAL YEAR 1999												FISCAL YEAR 2000												L A T E R
					CALENDAR YEAR 1999												CALENDAR YEAR 2000												
					1998						1999						2000						2001						
					O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	
GPS Block IIF, Boeing	USAF	6	3	3																						3			
TOTAL		6	3	3																						3			
MANUFACTURER'S NAME	Boeing	LOCATION Downey, CA	PRODUCTION RATES			REACHED			PROCUREMENT LEAD TIME												MFG TIME			TOTAL AFTER 1 OCT					
			MIN SUST	SHIFT HOURS	M A X	D+			ADMIN LEAD TIME						PRIORITY			PRIORITY			PRIORITY								
REMARKS																													

P-1 Shopping List Item No. 20

Production Schedule

Exhibit P-21, page 8 of 11

UNCLASSIFIED

PAGE 5 - 16

**Exhibit P-21 (2), Production Schedule**

**Date: February 2000**

**Exhibit P-21 (2), Production Schedule**

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number
---

### P-1 Line Item Nomenclature

**Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 20**

## Global Positioning System (Space)

[illegible]

REMARKS

**P-1 Shopping List Item No. 20**

## Production Schedule

UNCLASSIFIED PAGE 5 - 17



UNCLASSIFIED

## Exhibit P-21 (3), Production Schedule

Date: February 2000

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

P-1 Line Item Nomenclature

## Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 20

## Global Positioning System (Space)

ITEM/MANUFACTURER/ PROCUREMENT YEAR	S E R V	PROC. QTY	ACCP. PRIOR TO 1 OCT 2002	BALANCE DUE AS OF 1 OCT 2002	FISCAL YEAR 2003												FISCAL YEAR 2004											
					CALENDAR YEAR 2003												CALENDAR YEAR 2004											
					O	N	D	J	F	M	A	M	J	J	A	A	O	N	D	J	F	M	A	M	J	J	A	A
GPS Block IIF, Boeing	USAF	6	6	0																								
TOTAL																												
					PRODUCTION RATES		REACHED D+		ADMIN LEAD TIME				MFG TIME		TOTAL AFTER 1 OCT													
					MIN SUST	SHIFT HOURS DAYS	M A X	PRIOR 1 OCT				AFTER 1 OCT		55														
MANUFACTURER'S NAME					LOCATION																							
Boeing					Downey, CA																							
REMARKS																												

P-1 Shopping List Item No. 20

Production Schedule

Exhibit P-21 (3), page 10 of 11

UNCLASSIFIED PAGE 5 - 18

UNCLASSIFIED

## Exhibit P-21 (4), Production Schedule

Date: February 2000

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

P-1 Line Item Nomenclature

## Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 20

## Global Positioning System (Space)

ITEM/MANUFACTURER/ PROCUREMENT YEAR	S E R V	PROC. QTY	ACCEP. PRIOR TO 1 OCT 2004	BALANCE DUE AS OF 1 OCT 2004	FISCAL YEAR 2005												FISCAL YEAR 2006											
					2004				CALENDAR YEAR 2005				CALENDAR YEAR 2006				CALENDAR YEAR 2006				CALENDAR YEAR 2006							
					O	N	D	C	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
GPS Block IIF, Boeing	USAF	6	6	6	0																							
TOTAL		6	6	6	0																							
MANUFACTURER'S NAME Boeing					PRODUCTION RATES		REACHED D+		ADMIN LEAD TIME				MFG TIME		TOTAL AFTER 1 OCT													
					MIN SUST	SHIFT HOURS DAYS	M A X	PRIOR 1 OCT				AFTER 1 OCT		55														
LOCATION Downey, CA									INITIAL REORDER				67															
REMARKS																												

P-1 Shopping List Item No. 20

Production Schedule

Exhibit P-21 (4), page 11 of 11

UNCLASSIFIED PAGE 5 - 19

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Item Justification</b>										<b>Date: February 2000</b>	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 21</b>										<b>Global Positioning System (GPS)</b>	
										<b>Advance Procurement</b>	
Program Element for Code B Items:										GPS Block IIF 0604480F, GPS 0305165F (RDT&E, AF)	
Other Related Program Elements:											
	ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total
Proc Qty	A										
Cost (\$ M)		898.417								63.997	962.414
Advance Proc Cost (\$ M)					13.404	42.494	38.871	33.457	32.951		161.177
Weapon System Cost (\$ M)		898.417			13.404	42.494	38.871	33.457	32.951	63.997	1123.591
Initial Spares (\$ M)											
Total Proc Cost (\$ M)		898.417			13.404	42.494	38.871	33.457	32.951	63.997	1123.591
Flyaway Unit Cost (\$ M)											
Wpn Sys Unit Cost (\$ M)											
<p><b>Description</b></p> <p>MISSION AND DESCRIPTION: The NAVSTAR Global Positioning System (GPS) fills validated Joint Service requirements for worldwide, accurate, common grid three-dimensional positioning/navigation for military aircraft, ships, and ground personnel. The consistent accuracy, unaffected by location or weather and available in real time, significantly improves effectiveness of reconnaissance, weapons delivery, mine countermeasures and rapid deployment for all Services. The system is composed of three segments: user equipment (0305164F), satellites and a control network. The satellites broadcast high-accuracy data using precisely synchronized signals which are received and processed by user equipment installed in military platforms. This equipment computes the platform position and velocity and provides steering vectors to target locations or navigation waypoints. The control segment daily updates the navigation messages broadcast from the satellites to maintain system precision in three dimensions to 16 meters spherical error probable worldwide. The satellites are currently launched on Delta, and will be launched on the Evolved Expendable Launch Vehicle (EELV) beginning with the IIF satellites. The system hosts the Nuclear Detonation Detection System (0305913F). The initial buy of 28 satellites was awarded as a multiyear contract in September 1982 for a total of \$1.023 billion. A follow-on competitively awarded multiyear procurement of 20 replenishment satellites plus one option satellite began in FY1991 and will complete with final delivery in FY2000. The acquisition strategy for the Block IIF satellites is a competitive multiyear contract for 6 satellites with advance buy in FY1996, and annual buys of 3 modernized satellites beginning in FY2003. A \$67.5M FY00 reprogramming action is being prepared and will be submitted to Congress for approval to fully fund the new modernization program. \$18 million of the \$67.5M FY00 request will finance advance parts buys to modernize Block IIF satellites 1 through 3 and hardware recurring costs for Block IIR modernization. The remaining \$45.5M of the \$67.5M FY00 request will finance development efforts.</p> <p><b>FY 2001 Program Justification</b></p> <p>FY2001 funding is advance buy for modernization on IIF satellites 4-6.</p>											
P-1 Shopping List Item No. 21										Budget Item Justification Exhibit P-40, page 1 of 3	

**UNCLASSIFIED**

<b>Exhibit P-10 p.1, Advance Procurement Requirements Analysis</b>										<b>Date: February 2000</b>		
<b>(Page 1 - Funding)</b>												
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature		
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 21</b>										<b>Global Positioning System (GPS)</b>		
<b>Advance Procurement</b>										<b>Advance Procurement</b>		
Weapon System										First System Completion Date		
GPS AP										Jan-01		
First System Award Date										Jan-96		
(\$ in Millions)												
Description	PLT	When Rqd	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total
End Item Qty			55					3	3	3	33	97
CFE												
GFE												
EOQ			898.417									898.417
Design												
Term Liability												
Long Lead Parts				0.000	0.000	13.404	42.494	38.871	33.457	32.951	63.997	225.174
TOTAL AP			898.417	0.000	0.000	13.404	42.494	38.871	33.457	32.951	63.997	1123.591
<b>Description:</b>												
To Comp' includes 24 satellites beyond the current IIF contract as reported in the Selected Acquisition Report (SAR) that assumes 3 satellites per year through 2016.												
Advance Buy Payback Schedule												
FY01 FY02 FY03 FY04 FY05 FY06 TOTAL												
FY01 Adv Buy:	\$13.404M	0.000	13404	0.000	0.000	0.000	0.000	0.000	0.000	0.000	13.404	
FY02 Adv Buy:	\$42.494M	0.000	42494	0.000	0.000	0.000	0.000	0.000	0.000	0.000	42.494	
FY03 Adv Buy:	\$38.871M	0.000	0.000	0.000	38871	0.000	0.000	0.000	0.000	0.000	38.871	
FY04 Adv Buy:	\$33.457M	0.000	0.000	0.000	0.000	33457	0.000	0.000	0.000	0.000	33.457	
FY05 Adv Buy:	\$32.951M	0.000	0.000	0.000	0.000	0.000	32951	0.000	0.000	0.000	32.951	

**UNCLASSIFIED**

<b>Exhibit P-10 p.2, Advance Procurement Requirements Analysis</b>					<b>Date: February 2000</b>	
<b>(Page 2 - Budget Justification)</b>						
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number					P-1 Line Item Nomenclature	
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 21</b>					<b>Global Positioning System (GPS)</b>	
					<b>Advance Procurement</b>	
Weapon System						
GPS AP						
(TOA, \$ in Millions)						
<u>Description</u>	<u>PLT</u>	<u>QPA</u>	<u>Unit Cost</u>	<u>FY 2001 QTY</u>	<u>FY 2001 Contract Forecast Date</u>	<u>FY 2001 Total Cost Request</u>
<u>End Item</u>						
CFE						
GFE						
EOQ	12	N/A	13.404	1	Jan-01	13.404
Design						
Term Liability						
Long Lead Parts						
TOTAL AP						13.404
<u>Description:</u> Modernization on Block IIF satellites 4-6						
P-1 Shopping List Item No. 21					Advance Procurement Requirements Analysis (Page 2 - Budget Justification) Exhibit P-10 p.2, page 3 of 3	

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Item Justification</b>												<b>Date:</b> February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number												P-1 Line Item Nomenclature	
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 22</b>												<b>NUDET Detection System (NDS)</b>	
Program Element for Code B Items:												PE 35913F	
N/A												Other Related Program Elements:	
ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total			
A													
Proc Qty													
Total Proc Cost (\$ M)			2.780	1.547	1.478	1.507	1.539	1.568	1.601	TBD	TBD		

**Description**

The U.S. Nuclear Detonation (NUDET) Detection System (USNDS) provides the capability to detect, locate, and report detonations on a global basis near real time. The USNDS supports requirements for USSPACECOM (Integrated Tactical Warning and Attack Assessment), USSTRATCOM (Nuclear Force Management) and AFTAC (Treaty Monitoring). The USNDS payload contains Optical, X-Ray, Electromagnetic Pulse (EMP/W-Sensor), and Dosimeter sensors. These sensors plus the processing and communications equipment constitute the USNDS payload installed on the GPS satellites. The Air Force funds W-Sensor on orbit support and anomaly resolution, as well as warranty and spares on GPS Block IIR and IIF satellites. Department of Energy funds the Optical, X-Ray, and Dosimeter sensors.

**FY 2001 Program Justification**

Funds engineering, system management, and schedule support for production and integration of the USNDS payload.



Exhibit P-5, Weapon System Cost Analysis										Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 22										NUDET Detection System (NDS)	
Manufacturer's Name/Plant City/State Location										Subline Item	
ITT Aerospace Comm Div, Clifton, NJ 07014										N/A	
Weapon System Cost Elements		Ident Code	Total Cost In Millions of Dollars								
			FY 1999			FY 2000			FY 2001		
			Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Technical Support		A			1.844						
Program Support		A			0.936			1.547			1.478
On-Orbit Support		A									
TOTAL PROGRAM					2.780			1.547			1.478
<u>Comments</u>											

[illegible]

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Item Justification</b>									
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number									
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 23</b>									
Program Element for Code B Items:		N/A	Other Related Program Elements:						
ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	Total
A	8								8
Total Proc Cost (\$ M)	1074.722	42.962						0.000	1117.684

Date: February 2000

P-1 Line Item Nomenclature

**Inertial Upper Stages (IUS)**

**Description**

This program acquires and processes the Inertial Upper Stages (IUS) to support Defense Support Program (DSP) satellite launches. IUS is the upper stage that delivers DSP satellites to their required operational orbit after launch and separation from the Titan IV expendable launch vehicle. The assembled components for the four remaining IUS units are procured and in storage. Remaining program effort includes building-up and integrating the IUS with the spacecraft and launch vehicle, providing Independent Validation and Verification for software (required due to the uniqueness of each DSP satellite), providing launch services, and conducting post flight analyses. Beginning in FY00, all IUS funding was moved to PE 0305144F, P-1 Line Item Titan Space Boosters.

**FY 2001 Program Justification**

Funds continuous IUS technical support, engineering change proposals, in-house production and launch support through a Federally-Funded Research and Development Center (FFRDC), and contractor integration and launch services. Beginning in FY00, funds for IUS were moved to Titan Space Boosters, PE 0305144F.

P-1 Shopping List Item No. 23

Budget Item Justification  
Exhibit P-40, page 1 of 3

<b>Exhibit P-5, Weapon System Cost Analysis</b>	<b>Date: February 2000</b>
Appropriation (Treasury) Code/CC/BBA/BSA/Item Control Number	P-1 Line Item Nomenclature
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 23</b>	<b>Inertial Upper Stages (IUS)</b>

Manufacturer's Name/Plant City/State Location			Subline Item											
Weapon System Cost Elements	Ident Code	Total Cost In Millions of Dollars												
		FY 1999			FY 2000			FY 2001						
		Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost				
Integration & Launch Services	A			32.684						0.000				0.000
IUS Flight Telemetry Sim Sys Upgrade	A			0.800						0.000				0.000
Aerospace Technical Support	A			5.383						0.000				0.000
TDRSS Receivers	A			0.000						0.000				0.000
Program Office Support	A			0.750						0.000				0.000
Independent Verification & Validation	A			3.050						0.000				0.000
OSD Withhold	A			0.295										
TOTAL PROGRAM				42.962						0.000				0.000

Beginning with FY00, funds for IUS were moved to PE 35144F, P-1 Line Item Titan Space Boosters.

Exhibit P-5A, Procurement History and Planning											Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number											P-1 Line Item Nomenclature	
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 23											Inertial Upper Stages (IUS)	
Weapon System											Subline Item	
IUS												
WBS Cost Elements	Qty	Unit Cost	Location of PCO	RFP Issue Date	Contract Method	Contract Type	Contractor and Location	Award Date	Date of First Delivery	Specs Available Now?	Date Revisions Available?	
Inertial Upper Stage FY99			SMC, CA		SS	FPIF	Boeing Defense & Space, Kent WA	Nov-97				
Independent Verification & Validation FY99			SMC, CA		SS	CPAF	Lockheed-Martin Corp, Denver CO	Nov-97				
Integration & Launch Support FY99			SMC, CA		SS	CPAF	Boeing Defense & Space, Kent WA	Sep-97				
Technical Support FY99			SMC, CA		SS	CPFF	Aerospace Corp, El Segundo CA	Oct-97				
Remarks												

Procurement History and Planning

Exhibit P-5A, page 3 of 3

P-1 Shopping List Item No. 23

**THIS PAGE INTENTIONALLY LEFT BLANK**

# UNCLASSIFIED

<b>Exhibit P-40, Budget Item Justification</b>										Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 24</b>										<b>Defense Meteorological Satellite Program (DMSP)</b>	
Program Element for Code B Items:										0603434F	
Other Related Program Elements:											
ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total	
A	45									45	
Proc Qty											
Total Proc Cost (\$ M)		40.607	35.775	68.582	48.695	58.176	50.069	49.134		351.038	
<p><b>Description</b></p> <p>DESCRIPTION: The Defense Meteorological Satellite Program (DMSP) is a joint service program that provides timely, high quality, worldwide visible and infrared cloud imagery and other specialized meteorological, oceanographic and solar-geophysical data to support DoD strategic missions through all levels of conflicts, consistent with the survivability of the supported forces. DMSP also provides real-time direct readout of local weather to ground and ship based tactical terminals supporting DoD forces worldwide.</p> <p><b>FY 2001 Program Justification</b></p> <p>Funding supports spacecraft, primary sensor, and secondary environmental sensors support/services contracts to include the following activities:</p> <ul style="list-style-type: none"> <li>- repair/replacement of defective or shelf-life limited components including pyrotechnics and spacecraft batteries</li> <li>- independent validation/verification of Evolved Expendable Launch Vehicle (EELV) booster flight software</li> <li>- Satellites S-17 through S-20 solid state recorder procurement</li> <li>- Block 5D-3 satellites automated battery test system</li> <li>- EELV interface kits</li> <li>- support for launch and operations checkout</li> <li>- general systems engineering/integration support for DMSP satellite on-going sustainment</li> <li>- satellite storage</li> <li>- annual operability testing of stored DMSP satellites</li> <li>- Special Sensor Microwave Imager/Sounder (SSMIS) sensor to satellite integration and post-integration testing.</li> </ul>											
P-1 Shopping List Item No. 24										Budget Item Justification Exhibit P-40, page 1 of 3	

## UNCLASSIFIED

Exhibit P-5, Weapon System Cost Analysis				Date: February 2000						
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number				P-1 Line Item Nomenclature						
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 24				Defense Meteorological Satellite Program (DMSP)						
Manufacturer's Name/Plant City/State Location		Subline Item								
Weapon System Cost Elements		Ident Code	Total Cost In Millions of Dollars							
			FY 1999			FY 2000				
			Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost		
Checkout & Launch		A								
Storage, Reactivation, and Trans		A								
Operations Checkout		A			2.824					1.055
Launch Base		A			0.103			0.110		0.128
Propellants		A						0.005		0.005
Total Checkout & Launch		A			2.927			0.115		1.188
Support Costs										
Technical Support		A								
Spacecraft On-orbit support		A			5.100			7.590		7.720
Primary Sensor On-orbit Support		A			15.988			17.129		34.668
Mission Sensor On-orbit Support		A			11.915			6.280		18.189
Ground Segment Support		A			4.347			4.661		6.817
Total Support Cost		A			0.330					
					37.680			35.660		67.394
TOTAL PROGRAM										
					40.607			35.775		68.582
Comments										
Primary Sensor On-orbit Support FY01 funding increased from prior years to finance Block 5D-3 satellites F17 through F20 solid state recorder procurement.										
Spacecraft On-orbit Support FY01 funding increased from previous years to support the following activities:										
- Battery cell procurement and battery builds										
- Satellites S-17 through S-20 solid state recorder integration										
- Block 5D-3 satellite unsustainable test equip upgrade/replacement										
- EELV flight software independent verification/validation										
- Shelf-life limited spacecraft bus pyrotechnics replacement										
- SSMIS retrofit										
- EELV interface procurement										
P-1 Shopping List Item No. 24				Weapon System Cost Analysis Exhibit P-5, page 2 of 3						

## UNCLASSIFIED

Exhibit P-5A, Procurement History and Planning										Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 24										Defense Meteorological Satellite Program (DMSP)	
Weapon System										Subline Item	
DMSP											
WBS Cost Elements	Qty	Unit Cost	Location of PCO	RFP Issue Date	Contract Method	Contract Type	Contractor and Location	Award Date	Date of First Delivery	Specs Available Now?	Date Revisions Available?
Spacecraft Support & Services	0		LAAFB, CA		SS	CPAF	Lockheed Martin Sunnyvale, CA	May-97			
Primary Sensor Support & Services	0		LAAFB, CA		SS	CPAF	Northrop Grumman Baltimore, MD	May-95			
SSMIS Mission Sensor Support & Services	0		LAAFB, CA		SS	CPAF	Aerojet ElectroSystems Azusa, CA	May-98			
SSM/I Mission Sensor Support & Services	0		LAAFB, CA		SS	CPAF	Raytheon Denver, CO	May-96			
SSULI Mission Sensor Support & Services	0		Washington, D.C.		SS	MIPR	NRL, Washington, D.C.	Dec-01			
SSUSI Mission Sensor Support & Services	0		Arlington, VA		SS	MIPR	NA VSEA, Arlington, VA	Dec-01			
SSIES/SSJ Mission Sensor Storage & Maintenance	0		Hanscom AFB, MA		SS	MIPR	Phillips Lab, Hanscom AFB, MA	Dec-01			
Ground Systems Support & Services	0		Peterson AFB, CO		C	CPAF	Harris, Melbourne, FL	Jan-95			
Technical Support	0		LAAFB, CA		SS	CPAF	Aerospace Corp, El Segundo, CA	Oct-95			
SSJ Mission Sensor Support & Services	0		LAAFB, CA		SS	MIPR	Sandia Labs, Albuquerque, NM	Oct-00			
<u>Remarks</u>											
P-1 Shopping List Item No. 24										Procurement History and Planning Exhibit P-5A, page 3 of 3	



**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Item Justification</b>									
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number									
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 25</b>									
Program Element for Code B Items:		N/A	Other Related Program Elements:						
ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	Total
A	19								19
Total Proc Cost (\$ M)		86.964	108.342	106.356	113.770	100.528	30.335	35.577	581.872

Date: February 2000

P-1 Line Item Nomenclature

**Defense Support Program (DSP)**

**Description**

The Defense Support Program (DSP) is a system of satellites in geostationary orbits, fixed and mobile ground processing stations, and a ground communications network. DSP's primary mission is to provide strategic and tactical warning of a ballistic missile attack. DSP 19 launched in April 1999 but failed to reach geosynchronous orbit. DSP 20 launch is scheduled for April 2000. The program is currently sustaining production of remaining satellites (DSP 21 through 23) including post-production storage, testing, launch preparation and services, and on-orbit testing. DSP satellites are launched on the Titan IVB, but will transition to the Evolved Expendable Launch Vehicle for the last launch (DSP 23). FY00 funding includes \$8M for Spacecraft Orbital Incentives. The follow-on program to DSP is Space-Based Infrared System (SBIRS).

**FY 2001 Program Justification**

Funding provides for launch capability retention, satellite storage, component repair, computer hardware and software support, and program unique test equipment maintenance. The FY01 program also supports DSP 22 launch and includes engineering effort to integrate DSP 23 on EELV.

P-1 Shopping List Item No. 25

Budget Item Justification  
Exhibit P-40, page 1 of 4

UNCLASSIFIED

PAGE 5 - 35

Exhibit P-5, Weapon System Cost Analysis						
Appropriation (Treasury) Code/CC/BAS/Item Control Number						
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 25						Date: February 2000
Manufacturer's Name/Plant City/State Location						P-1 Line Item Nomenclature
Subline Item						Defense Support Program (DSP)
Weapon System Cost Elements		Ident Code	Total Cost In Millions of Dollars			
			FY 1999		FY 2000	
			Qty	Unit Cost	Total Cost	
Checkout and Launch	A					
Storage, Reactivation, and Trans	A				98.889	92.470
Integration & Checkout	A				1.617	1.520
Total Checkout and Launch	A				100.506	93.990
Support Costs	A					
Technical Support	A				7.115	7.476
Program Support	A				0.721	4.890
Total Support Costs	A				7.836	12.366
Procurement Cost	A				108.342	106.356
TOTAL PROGRAM					108.342	106.356
Comments						

P-1 Shopping List Item No. 25

Weapon System Cost Analysis  
Exhibit P-5, page 2 of 4

## UNCLASSIFIED

Exhibit P-5A, Procurement History and Planning										Date: February 2000		
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature		
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 25										Defense Support Program (DSP)		
Weapon System										Subline Item		
DSP												
WBS Cost Elements	Qty	Unit Cost	Location of PCO	RFP Issue Date	Contract Method	Contract Type	Contractor and Location	Award Date	Date of First Delivery	Specs Available Now?	Date Revisions Available?	
TRW Post Production Services												
FY99			SMC/LA, CA		SS	CPAF	TRW, Inc	Oct-98	N/A	No	N/A	
FY00			SMC/LA, CA		SS	CPAF	TRW, Inc	Oct-99	N/A	No	N/A	
FY01			SMC/LA, CA		SS	CPAF	TRW, Inc	Oct-00	N/A	No	N/A	
AESD Post Production Services												
FY99			SMC/LA, CA		SS	CPAF	Aerojet	Oct-98	N/A	No	N/A	
FY00			SMC/LA, CA		SS	CPAF	Aerojet	Oct-09	N/A	No	N/A	
FY01			SMC/LA, CA		SS	CPAF	Aerojet	Oct-00	N/A	No	N/A	
Launch & Operations												
FY99			SMC/LA, CA		SS	CPAF	TRW, Inc.	Oct-98	N/A	No	N/A	
FY00			SMC/LA, CA		SS	CPAF	TRW, Inc.	Oct-99	N/A	No	N/A	
FY01			SMC/LA, CA		SS	CPAF	TRW, Inc.	Oct-00	N/A	No	N/A	
FY99			SMC/LA, CA		SS	CPAF	Aerojet	Oct-98	N/A	No	N/A	
FY00			SMC/LA, CA		SS	CPAF	Aerojet	Oct-99	N/A	No	N/A	

P-1 Shopping List Item No. 25

Procurement History and Planning  
Exhibit P-5A, page 3 of 4

UNCLASSIFIED

PAGE 5 - 37

<b>Exhibit P-5A, Procurement History and Planning</b>	<b>Date: February 2000</b>
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number	P-1 Line Item Nomenclature
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 25</b>	<b>Defense Support Program (DSP)</b>

<u>Weapon System</u>				Subline Item Continued							
	Qty	Unit Cost	Location of PCO	RFP Issue Date	Contract Method	Contract Type	Contractor and Location	Award Date	Date of First Delivery	Specs Available Now?	Date Revisions Available?
WBS Cost Elements			CA								
FY01			SMC/LA, CA		SS	CPAF	Aerojet	Oct-00	N/A	No	N/A
<u>Remarks</u>											

# UNCLASSIFIED

## Exhibit P-40, Budget Item Justification

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

### Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 26

Date: February 2000

P-1 Line Item Nomenclature

### Defense Satellite Communications System (DSCS)

Program Element for Code B Items:		N/A	Other Related Program Elements:							Def Sat Com Sys (0303110F) (RDT&E)	
ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total	
A	14								0	14	
Total Proc Cost (\$ M)		27.573	30.425	22.770	26.841	22.804	11.819	12.091		154.323	

#### Description

Defense Satellite Communications System (DSCS) is the backbone of the Government's satellite communications system, providing both secure voice and high data rate transmissions in the Super High Frequency band. DSCS provides unique and vital national security communications for global command and control, crisis management, intelligence and early warning data relay, treaty monitoring and surveillance information, and diplomatic traffic. The communications relayed through DSCS support the National Command Authorities, Defense Information System Network, Diplomatic Telecommunications Service, White House Communications Agency, Air Force Satellite Control Network, and ground mobile forces of all services.

The DSCS Service Life Enhancement Program (SLEP) includes additional modifications that increase the last four satellites' capacity to tactical users by more than 200%, and implements the DoD Space Architect's recommendation.

The first DSCS SLEP satellite was launched on 20 January 2000. The last two DSCS III satellites will launch on the Evolved Expendable Launch Vehicle (EELV) and will require modifications to the DSCS launch vehicle interfaces and additional launch loads analyses.

#### FY 2001 Program Justification

Program Sustainment: Maintains contractor core team required to support DSCS Program

Pre-launch activities: Includes requirements to store, maintain, test and prepare satellites for operational launch

Contractor support: Includes in-house support for the government DSCS team, pre-flight support, launch support, and post launch on-orbit support required to maintain the DSCS constellation

On-orbit support: Provides operational support to satellite operations, including anomaly resolution

Launch Services: Integrates payloads Mission 9 (B6) and Mission 10 (A3) to EELV payload adapter for FY02 and FY03 launch

P-1 Shopping List Item No. 26

Budget Item Justification  
Exhibit P-40, page 1 of 4

## UNCLASSIFIED

Exhibit P-5, Weapon System Cost Analysis					Date: February 2000						
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number					P-1 Line Item Nomenclature						
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 26					Defense Satellite Communications System (DSCS)						
Manufacturer's Name/Plant City/State Location		Subline Item									
Weapon System Cost Elements		Ident Code	Total Cost In Millions of Dollars								
			FY 1999			FY 2000					
			Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
Flyway Cost		A			0.000			0.000			0.000
Hardware-Recurring Vehicle		A			0.000			0.000			0.000
Subtotal Recurring		A			0.000			0.000			0.000
Total Flyway Cost		A			0.000			0.000			0.000
Service Life Enhancement Program (Qty)		A			0.000			0.000			0.000
Modification		A			0.000			0.000			0.000
Checkout & Launch		A									
Storage, Reactivation, and Trans		A			5.500			0.100			5.857
Integration and Checkout		A			2.345			11.621			0.000
Launch Services		A			5.321			4.000			4.700
Propellants		A			0.000			0.000			0.000
Total Checkout & Launch		A			13.166			15.721			10.557
Support Cost		A									
Technical Support		A			3.665			3.196			2.194
Program Support		A			0.000			0.000			0.000
On-Orbit Support		A			7.302			7.611			8.138
Space Vehicle Maintenance		A			3.440			3.987			1.881
Total Support Cost		A			14.407			14.704			12.213
Net P-1 Funding Cost		A			27.573			30.425			22.770
Less Advance Procurement (Current Year)		A			0.000			0.000			0.000
					P-1 Shopping List Item No. 26						
					Weapon System Cost Analysis Exhibit P-5, page 2 of 4						

UNCLASSIFIED

PAGE 5 - 40

**UNCLASSIFIED**

Exhibit P-5, Weapon System Cost Analysis				Date: February 2000						
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number				P-1 Line Item Nomenclature						
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 26				Defense Satellite Communications System (DSCS)						
Weapon System Cost Elements	Ident Code	Total Cost In Millions of Dollars								
		FY 1999			FY 2000			FY 2001		
		Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Procurement Cost				27.573			30.425			22.770
	A									
Plus Advance Procurement (Current Year)				0.000			0.000			0.000
	A						30.425			22.770
				27.573						
TOTAL PROGRAM				27.573			30.425			22.770
<p><b>Comments</b></p> <p>Storage, Reactivation, and Transportation: Satellite reactivation, storage, transportation is funded in FY99 and FY01. The FY00 amount is less than FY99 and FY01 since only satellite storage is funded in this year.</p> <p>Integration and Checkout: The FY00 amount increases from FY99 to fund satellite B11 integration on Atlas launch vehicle, first year EELV integration for satellite B6, two electrical systems tests (for satellites B6 and A3), and other miscellaneous tests and integration contract award fees.</p>										
				<p align="center">P-1 Shopping List Item No. 26</p>						
				<p align="center">Weapon System Cost Analysis Exhibit P-5, page 3 of 4</p>						



## UNCLASSIFIED

Exhibit P-5A, Procurement History and Planning										Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 26										Defense Satellite Communications System (DSCS)	
Weapon System										Subline Item	
DSCS											
WBS Cost Elements	Qty	Unit Cost	Location of PCO	RFP Issue Date	Contract Method	Contract Type	Contractor and Location	Award Date	Date of First Delivery	Specs Available Now?	Date Revisions Available?
Program Sustainment											
FY99			SMC		SS	Option	LMMS/Sunnyvale, CA	Jan-99			
FY00			SMC		SS	Option	LMMS/Sunnyvale, CA	Jan-00			
FY01			SMC		SS	Option	LMMS/Sunnyvale, CA	Jan-01			
Storage (PreLaunch Act)											
FY99			SMC		SS	Option	LMMS/Sunnyvale, CA	Jan-99			
FY00			SMC		SS	Option	LMMS/Sunnyvale, CA	Jan-00			
FY01			SMC		SS	Option	LMMS/Sunnyvale, CA	Jan-01			
Spacecraft Component											
FY99			SMC		SS	Option	LMMS/Sunnyvale, CA	Jan-99			
FY00			SMC		SS	Option	LMMS/Sunnyvale, CA	Jan-00			
FY01			SMC		SS	Option	LMMS/Sunnyvale, CA	Jan-01			
Deferred/Delayed Tests											
FY99			SMC		SS	Option	LMMS/Sunnyvale, CA	Nov-99			
FY00			SMC		SS	Option	LMMS/Sunnyvale, CA	Nov-00			
FY01			SMC		SS	Option	LMMS/Sunnyvale, CA	Nov-01			
Readiness Reviews											
FY99			SMC		SS	Option	LMMS/Sunnyvale, CA	Mar-99			
FY00			SMC		SS	Option	LMMS/Sunnyvale, CA	Mar-00			
FY01			SMC		SS	Option	LMMS/Sunnyvale, CA	Mar-01			
Remarks											
P-1 Shopping List Item No. 26										Procurement History and Planning	
Exhibit P-5A, page 4 of 4										Exhibit P-5A, page 4 of 4	

UNCLASSIFIED

PAGE 5 - 42

**UNCLASSIFIED**

Exhibit P-40, Budget Item Justification										Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 27										Titan Space Boosters	
Program Element for Code B Items:		N/A		Other Related Program Elements:							
ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total	
Proc Qty	A	40								40	
Cost (\$ M)		4932.810	535.612	429.260	469.720	51.433	28.126	35.864	0.000	6853.275	
Advance Proc Cost (\$ M)											
Weapon System Cost (\$ M)		4932.810	535.612	429.260	469.720	51.433	28.126	35.864	0.000	6853.275	
Initial Spares (\$ M)											
Total Proc Cost (\$ M)		4932.810	535.612	429.260	469.720	51.433	28.126	35.864	0.000	6853.275	
Flyaway Unit Cost (\$ M)											
Wpn Sys Unit Cost (\$ M)											

**Description**  
National security requirements dictate a continuing, highly reliable means of placing critical DoD satellites into required orbits. The Titan program provides the capability to launch the largest of these satellites into near-earth and geosynchronous orbits from either the east or west coast launch facilities. This program provides several different Titan IV configurations (No Upper Stage (NUS), Inertial Upper Stage (IUS), and Centaur) and the Titan II medium-class launch vehicle. In addition, the Titan program has developed a new vehicle configuration, the Titan IVB, with upgraded solid rocket motors (SRMU), new avionics and ground support equipment to meet reliability and increased performance requirements. This program provides continuing integration support to the payload community as well as continuing engineering support to enhance system characterization and reliability. The 39-vehicle program acquisition strategy addresses an early transition from the current 39 vehicle development/production and payload integration contracts to new contracts awarded in FY96 and FY97 designed to improve cost accountability, correct contract deficiencies, and establish an overall programmatic framework for flying out the Titan program and transitioning heavy-lift requirements to the Evolved Expendable Launch Vehicle. The strategy combines Titan II and Titan IV production, storage, final assembly, launch operations, anomaly resolution, program development and hardware requalification, payload integration, program studies, and pad maintenance and deactivation. Under this strategy, these production and launch operations contracts for activities at Cape Canaveral AS (CCAS), FL and Vandenberg Air Force Base (VAFB), CA were awarded on 1 Apr 96; they provide uninterrupted support to the 39 vehicle program. In the FY93 Appropriations Act, the Titan program was granted a waiver from DoD's full funding policy. Effective FY00 the Titan Space Boosters P-1 line item also includes the Inertial Upper Stage to support the Defense Support Program (DSP) satellite launches. IUS is the upper stage that places the DSP into transfer and final geosynchronous orbit. The Titan program is in final production. The IUS program has completed production and end items are awaiting launch.

Note: 40 cores and 39 Solid Rocket Motor Upgrade (SRMU) units procured  
Note: FY99 is comprised of \$51.5M in 99/00 funds from FY99 Emergency Supplemental and \$484.112M in 99/01 funds

**FY 2001 Program Justification**  
Funds continuing production, final assembly, and launch support for AF and National Reconnaissance Office (NRO) missions at CCAS, Florida, as well as the AF costs for launch vehicle storage, award fees, program support and program close-out for the 39-vehicle program.

## UNCLASSIFIED

Exhibit P-5, Weapon System Cost Analysis				Date: February 2000						
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number				P-1 Line Item Nomenclature						
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 27				Titan Space Boosters						
Manufacturer's Name/Plant City/State Location				Subline Item						
				Total Cost In Millions of Dollars						
Weapon System Cost Elements		Ident Code	FY 1999			FY 2000			FY 2001	
			Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
Titan Hardware Production		A			278.784			151.900		170.947
Titan Launch Operations		A			206.500			180.500		218.660
Titan Recurring Launch Integration		A			11.000			7.500		6.342
IUS Integration and Launch Support		A			0.000			38.500		36.287
IUS Independent Verification and Validation		A			0.000			2.000		2.050
Other Government Costs		A			39.328			48.860		35.434
TOTAL PROGRAM					535.612			429.260		469.720

Comments

Of the \$535.612M FY99 funds, \$51.5M is tracked under Appropriation 99/00 -- FY99 Emergency Supplemental.

## UNCLASSIFIED

Exhibit P-5A, Procurement History and Planning										Date: February 2000		
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature		
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 27										Titan Space Boosters		
Weapon System										Subline Item		
TSB												
WBS Cost Elements	Qty	Unit Cost	Location of PCO	RFP Issue Date	Contract Method	Contract Type	Contractor and Location	Award Date	Date of First Delivery	Specs Available Now?	Date Revisions Available?	
Titan Vehicle Hardware Production FY99		N/A	SMC		SS	FPIF/AF	Lockheed-Martin Corp. Denver CO	Apr-96	N/A			
Titan Vehicle Hardware Production FY00		N/A	SMC		SS	FPIF/AF	Lockheed-Martin Corp. Denver CO	Apr-96	N/A			
Titan Vehicle Hardware Production FY01		N/A	SMC		SS	FPIF/AF	Lockheed-Martin Corp. Denver CO	Apr-96	N/A			
Titan Launch Operations FY99		N/A	SMC		SS	CPFF/AF	Lockheed-Martin Corp. Denver CO	Apr-96	N/A			
Titan Launch Operations FY00		N/A	SMC		SS	CPFF/AF	Lockheed-Martin Corp. Denver CO	Apr-96	N/A			
Titan Launch Operations FY01		N/A	SMC		SS	CPFF/AF	Lockheed-Martin Corp. Denver CO	Apr-96	N/A			
Other Government Costs FY99		N/A	SMC		SS	CPFF	Aerospace Corp, El Segundo, CA		N/A			
Other Government Costs FY01		N/A	SMC		SS	CPFF	Aerospace Corp, El Segundo, CA		N/A			
Other Government Costs FY01		N/A	SMC		SS	CPFF	Aerospace Corp, El Segundo, CA		N/A			
Unified Payload Integration FY99		N/A	SMC		SS	CPFF/AF	Lockheed-Martin Corp. Denver CO	Oct-97	N/A			
Unified Payload Integration FY00		N/A	SMC		SS	CPFF/AF	Lockheed-Martin Corp. Denver CO	Oct-97	N/A			
Unified Payload Integration FY01		N/A	SMC		SS	CPFF/AF	Lockheed-Martin Corp. Denver CO	Oct-97	N/A			
P-1 Shopping List Item No. 27										Procurement History and Planning		
										Exhibit P-5A, page 3 of 4		

UNCLASSIFIED

PAGE 5 - 45

Exhibit P-5A, Procurement History and Planning										Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 27										Titan Space Boosters	
Weapon System										Subline Item Continued	
WBS Cost Elements	Qty	Unit Cost	Location of PCO	RFP Issue Date	Contract Method	Contract Type	Contractor and Location	Award Date	Date of First Delivery	Specs Available Now?	Date Revisions Available?
IUS Integration and Launch Support FY99		N/A	SMC		SS	CPAF	Boeing Defense and Space Kent, WA	Jun-97	N/A		
IUS Integration and Launch Support FY00		N/A	SMC		SS	CPAF	Boeing Defense and Space Kent, WA	Jun-97	N/A		
IUS Integration and Launch Support FY01		N/A	SMC		SS	CPAF	Boeing Defense and Space Kent, WA	Jun-97	N/A		
IUS Independent Verification & Validation FY99		N/A	SMC		SS	CPAF	Lockheed-Martin Corp. Denver CO	Jun-97	N/A		
IUS Independent Verification & Validation FY00		N/A	SMC		SS	CPAF	Lockheed-Martin Corp. Denver CO	Jun-97	N/A		
IUS Independent Verification & Validation FY01		N/A	SMC		SS	CPAF	Lockheed-Martin Corp. Denver CO	Jun-97	N/A		
Remarks											
Other Gov't Costs contracts are awarded annually.											

Procurement History and Planning

Exhibit P-5A, page 4 of 4

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Item Justification</b>									
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number									
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 28</b>									
<b>Evolved Expendable Launch Vehicle (EELV)</b>									
P-1 Line Item Nomenclature									
Date: February 2000									
Program Element for Code B Items:		Other Related Program Elements:							
ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	Total
Proc Qty				1	3	2	7	6	94
Cost (\$ M)			68.127	287.996	153.111	544.144	515.127	434.024	10580.929
Advance Proc Cost (\$ M)									
Weapon System Cost (\$ M)			68.127	287.996	153.111	544.144	515.127	434.024	10580.929
Initial Spares (\$ M)									
Total Proc Cost (\$ M)			68.127	287.996	153.111	544.144	515.127	434.024	10580.929
Flyaway Unit Cost (\$ M)									
Wpn Sys Unit Cost (\$ M)									
<b>Description</b>									
No advance procurement and no initial spares. Flyaway Unit Cost and Wpn Sys Unit Cost are not applicable due to the mix (medium through heavy) of vehicles in the program.									
<p>DESCRIPTION: The dual-use EELV system will allow the Government to competitively procure commercial launch services that successfully deliver the National Launch Forecast (NLF) payloads. The EELV system includes launch vehicles, a standard payload interface, infrastructure, support systems, mission integration (includes mission unique requirements), special studies (mission feasibility analyses, secondary payloads etc.), and launch operations activities. EELV is responsible for launching the Government portion of the NLF currently supported by Titan II, Delta II, Atlas II, and Titan IV with a first launch scheduled in 2002. Evolved from current expendable launch systems and new applications of existing technology, EELV will support military, intelligence, civil, and commercial mission requirements.</p> <p>The EELV concept of a family of launch vehicles emphasizes commonality of hardware and infrastructure and economies of scale to enhance production, operations, and support efficiencies. The current approach maintains competition throughout the life of the program, leverages the growing commercial market, and allows partnership with industry. This allows the Air Force, National Reconnaissance Office (NRO), and all other Government agencies using EELV to continue to realize cost savings during each follow-on procurement.</p> <p>The Air Force is responsible for budgeting only for its own missions. All non-Air Force EELV launch services are to be budgeted within their respective agencies (NRO, etc.). In October 1998, the Government awarded two Initial Launch Services (ILS) contracts to The Boeing Company and Lockheed Martin Astronautics for launches scheduled between FY02 and FY06. EELV launch services include all of the necessary hardware and recurring integration required for launch. Any non-recurring integration is the responsibility of the particular Air Force or other agency payload program office. EELV launch services must be ordered 24 calendar months (two fiscal years) prior to the planned mission, are fully funded, and firm fixed-price.</p>									
P-1 Shopping List Item No. 28									
Budget Item Justification									
Exhibit P-40, page 1 of 9									

<b>Exhibit P-40, Budget Item Justification</b>	Date: February 2000
P-1 Line Item Nomenclature <b>Evolved Expendable Launch Vehicle (EELV)</b>	
<p><b>FY 2001 Program Justification</b>          EELV FY2001 procurement funds are required to support three launch services in FY03: DSCS, DSP, &amp; DMSP.</p>	
P-1 Shopping List Item No. 28	Budget Item Justification Exhibit P-40, page 2 of 9

**UNCLASSIFIED**

<b>Exhibit P-5, Weapon System Cost Analysis</b>				<b>Date: February 2000</b>				
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number				P-1 Line Item Nomenclature				
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 28</b>				<b>Involved Expendable Launch Vehicle (EELV)</b>				
Manufacturer's Name/Plant City/State Location				Subline Item				
Boeing /Huntington Beach/CA - Lockheed Martin/Denver/CO								
Weapon System Cost Elements		Ident Code	Total Cost In Millions of Dollars					
			FY 1999		FY 2000		FY 2001	
			Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Launch Services		A				1		68.127
TOTAL PROGRAM								287.996
<b>Comments</b> Unit costs are not applicable for this program. Launch services costs are competition sensitive and are available on a need to know basis from the Air Force. All non-Air Force launch services must be budgeted within the respective agency.								
P-1 Shopping List Item No. 28								
Weapon System Cost Analysis Exhibit P-5, page 3 of 9								



**UNCLASSIFIED**

<b>Exhibit P-5A, Procurement History and Planning</b>										Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 28</b>										<b>Evolved Expendable Launch Vehicle (EELV)</b>	
<u>Weapon System</u>											
EELV											
Subline Item											
WBS Cost Elements	Qty	Unit Cost	Location of PCO	RFP Issue Date	Contract Method	Contract Type	Contractor and Location	Award Date	Date of First Delivery	Specs Available Now?	Date Revisions Available?
EELV Launch Services											
FY00	1		SMC	Jun-98	C	FP	The Boeing Company, CA	May-00	May-02	Yes	
FY01	3		SMC	Jun-98	C	FP	The Boeing Company, CA/Lockheed Martin Astronautics, CO	Dec-00	Dec-02	Yes	
<u>Remarks</u>											
Unit costs are not applicable for this program. Launch services costs are competition sensitive and are available on a need to know basis from the Air Force. All non-Air Force launch services must be budgeted within the respective agency.											
P-1 Shopping List Item No. 28										Procurement History and Planning	
UNCLASSIFIED										Exhibit P-5A, page 4 of 9	

UNCLASSIFIED

## Exhibit P-21, Production Schedule

Date: February 2000

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

P-1 Line Item Nomenclature

## Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 28

## Evolved Expendable Launch Vehicle (EELV)

ITEM/MANUFACTURER/ PROCUREMENT YEAR	S E R V	PROC. QTY	ACCEP. PRIOR TO 1 OCT 1998	BALANCE DUE AS OF 1 OCT 1998	FISCAL YEAR 1999												FISCAL YEAR 2000												L A T E R																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
					CALENDAR YEAR 1999												CALENDAR YEAR 2000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
					1998																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
					O C T	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									</

P-1 Shopping List Item No. 28

Production Schedule  
Exhibit P-21, page 5 of 9

UNCLASSIFIED

PAGE 5 - 51

UNCLASSIFIED

## Exhibit P-21 (2), Production Schedule

Date: February 2000

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

P-1 Line Item Nomenclature

## Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 28

## Evolved Expendable Launch Vehicle (EELV)

ITEM/MANUFACTURER/ PROCUREMENT YEAR	S E R V	PROC. QTY	ACCEP. PRIOR TO 1 OCT 2000	BALANCE DUE AS OF 1 OCT 2000	FISCAL YEAR 2001												FISCAL YEAR 2002												L A T T E R			
					CALENDAR YEAR 2001												CALENDAR YEAR 2002															
					2000																											
					O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				
EVOLVED EXPENDABLE LAUNCH VEHICLE (EELV) LAUNCH SERVICES	USAF	0	0	0																												0
	USAF		0	0																												0
	USAF		0	0																												0
	USAF		1	0																												0
	USAF		3	0																												3
	USAF		2	0																												2
	USAF		7	0																												7
	USAF		7	0																												7
	USAF		6	0																												6
TOTAL		26	0	0	26																											25
					PRODUCTION RATES				PROCUREMENT LEAD TIME																							
MANUFACTURER'S NAME	LOCATION	MIN SUST	SHIFT HOURS DAYS	MA X	REACHED				ADMIN LEAD TIME				MFG TIME				TOTAL AFTER 1 OCT															
					D+				PRIOR 1 OCT				AFTER 1 OCT																			
The Boeing Company	Huntington Beach, CA		0 1-8-5																													
Lockheed Martin Astronautics	Denver, Co		0 1-8-5																													

MANUFACTURER'S NAME	LOCATION	PRODUCTION RATES			REACHED			PROCUREMENT LEAD TIME						TOTAL		
		MIN	SUST	SHIFT	HOURS	A	D+	ADMIN			LEAD TIME			MFG		
					DAYS	X		PRIOR	AFTER	TOTAL	PRIOR	AFTER	TOTAL	PRIOR	AFTER	TOTAL
The Boeing Company	Huntington Beach, CA				0 1-8-5											
Lockheed Martin Astronautics	Denver, Co				0 1-8-5											
REMARKS																

P-1 Shopping List Item No. 28

Production Schedule  
Exhibit P-21 (2), page 6 of 9

UNCLASSIFIED

PAGE 5 - 52

## UNCLASSIFIED

## Exhibit P-21 (3), Production Schedule

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

## Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 28

Date: February 2000

P-1 Line Item Nomenclature

## Evolved Expendable Launch Vehicle (EELV)

ITEM/MANUFACTURER/ PROCUREMENT YEAR	S E R V	PROC. QTY	ACCEP. PRIOR TO 1 OCT 2002	BALANCE DUE AS OF 1 OCT 2002	FISCAL YEAR 2003												FISCAL YEAR 2004												L A T T E R																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
					CALENDAR YEAR 2003												CALENDAR YEAR 2004																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
					2002												2003													2004																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
					O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
EVOLVED EXPENDABLE LAUNCH VEHICLE (EELV) LAUNCH SERVICES	USAF	0	0	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												</

P-1 Shopping List Item No. 28

Production Schedule

Exhibit P-21 (3), page 7 of 9

UNCLASSIFIED

PAGE 5 - 53

UNCLASSIFIED

## Exhibit P-21 (4), Production Schedule

Date: February 2000

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

P-1 Line Item Nomenclature

## Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 28

## Evolved Expendable Launch Vehicle (EELV)

ITEM/MANUFACTURER/ PROCUREMENT YEAR	S E R V	PROC. QTY	ACCEP. PRIOR TO 1 OCT 2004	BALANCE DUE AS OF 1 OCT 2004	FISCAL YEAR 2005												FISCAL YEAR 2006												L A T E R					
					2004				CALENDAR YEAR 2005								CALENDAR YEAR 2006																	
					O C T	N O V	D E C	J A N	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P				
EVOLVED EXPENDABLE LAUNCH VEHICLE (EELV) LAUNCH SERVICES	USAF	0	0	0																														
FY 1998	USAF	0	0	0																														0
FY 1999	USAF	0	0	0																														0
FY 2000	USAF	1	1	0																														0
FY 2001	USAF	3	3	0																														0
FY 2002	USAF	2	2	0																														0
FY 2003	USAF	7	7	0																														0
FY 2004	USAF	7	7	0																														0
FY 2005	USAF	6	6	0																														0
TOTAL		26	6	6																														6
					PRODUCTION RATES												PROCUREMENT LEAD TIME																	
MANUFACTURER'S NAME	The Boeing Company	LOCATION	MIN SUST	SHIFT HOURS DAYS	REACHED D+												ADMIN LEAD TIME												MFG TIME	TOTAL AFTER 1 OCT				
					M A X												P R I O R 1 O C T																	
					0 1-8-5												A F T E R 1 O C T																	
		Huntington Beach, CA		0 1-8-5																									24	24				
Lockheed Martin Astronautics		Denver, Co		0 1-8-5																														
					INITIAL REORDER																													

P-1 Shopping List Item No. 28

Production Schedule

Exhibit P-21 (4), page 8 of 9

UNCLASSIFIED

PAGE 5 - 54

UNCLASSIFIED

## Exhibit P-21 (5), Production Schedule

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

## Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 28

Date: February 2000

P-1 Line Item Nomenclature

## Evolved Expendable Launch Vehicle (EELV)

ITEM/MANUFACTURER/ PROCUREMENT YEAR	S E R V	PROC. QTY	ACCEP. PRIOR TO 1 OCT 2006	BALANCE DUE AS OF 1 OCT 2006	FISCAL YEAR 2007												FISCAL YEAR 2008												L A T E R
					2006						CALENDAR YEAR 2007						CALENDAR YEAR 2008												
					O C T	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P		
EVOLVED EXPENDABLE LAUNCH VEHICLE (EELV) LAUNCH SERVICES	USAF	0	0	0	0																						0		
FY 1998	USAF	0	0	0	0																						0		
FY 1999	USAF	0	0	0	0																						0		
FY 2000	USAF	1	1	0	0																						0		
FY 2001	USAF	3	3	0	0																						0		
FY 2002	USAF	2	2	0	0																						0		
FY 2003	USAF	7	7	0	0																						0		
FY 2004	USAF	7	7	0	0																						0		
FY 2005	USAF	6	6	0	6	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0		
TOTAL		26	20	6	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0		
MANUFACTURER'S NAME The Boeing Company	LOCATION Huntington Beach, CA	PRODUCTION RATES			REACHED			PROCUREMENT LEAD TIME												MFG			TOTAL			S E P			
		MIN	SHIFT	M	D+			ADMIN						LEAD TIME						TIME			AFTER						
		SUST	HOURS	A																			1 OCT						
			DAYS	X																			24						
Lockheed Martin Astronautics																													
REMARKS																													

P-1 Shopping List Item No. 28

Production Schedule  
Exhibit P-21 (5), page 9 of 9

UNCLASSIFIED

PAGE 5 - 55

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Item Justification</b>										Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 29</b>										<b>Medium Launch Vehicles (MLV)</b>	
Program Element for Code B Items:		N/A		Other Related Program Elements:							
	ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total
Proc Qty	A	53	5							0	58
Cost (\$ M)		1939.495	172.268	64.013	55.939	47.161	46.767	37.199	36.947		2399.789
Advance Proc Cost (\$ M)		195.945									195.945
Weapon System Cost (\$ M)		2135.440	172.268	64.013	55.939	47.161	46.767	37.199	36.947		2595.734
Initial Spares (\$ M)											
Total Proc Cost (\$ M)		2135.440	172.268	64.013	55.939	47.161	46.767	37.199	36.947		2595.734
Flyaway Unit Cost (\$ M)											
Wpn Sys Unit Cost (\$ M)											

**Description**

Since the 1986 loss of the Space Shuttle Challenger, the Air Force has pursued a mixed fleet strategy of launching critical national security payloads, accomplished through the procurement of expendable launch systems. The Medium Launch Vehicles (MLV) procurement line supports two expendable launch vehicle systems: MLV II (Atlas II) and MLV III (Delta II). MLV I (Delta II) was completed in FY96.

MLV II (Atlas II) -- The Atlas II Medium Launch Vehicle II program was initiated in 1988 after it became apparent that original predictions of the impact of the Challenger accident were optimistic. The Atlas II contract was awarded in June 1988 to satisfy the launch requirements of Defense Satellite Communications Systems (DSCS) Block III satellites. The initial procurement year for the Atlas II was FY89 and the first launch occurred in February 1992. A total procurement of eight launches were planned through FY00 in support of DSCS requirements. One Atlas II launch remains in FY00.

MLV III (Delta II) -- The Delta II Medium Launch Vehicle III program was initiated in FY92 to competitively select a launch system to satisfy Navstar Global Positioning Satellites (GPS) launch requirements. The prime contract was awarded on 9 April 1993 to McDonnell Douglas (now Boeing) for the Delta II expendable launch vehicle. A total procurement of 21 launch vehicles was planned through FY99. However, due to the failure of the Delta II/GPS IIR mission on 17 January 1997, the contractor will replace the booster at no cost to the Government which reduces the government funded boosters to 20. The contractor's replacement booster reduced the FY99 MLV III booster procurement from six to five.

The MLV II and III programs include all tasks necessary to build, support, manage, and launch Air Force-funded launch systems. Typical costs include, but are not limited to, contracts for hardware procurement and launch operations, program office support, systems engineering and technical assistance, government furnished support equipment and facilities, propellants, transportation, storage, special studies, and engineering change orders to maintain vehicle/pad/range compatibility, safety, and reliability, as well as adjust contracts to match changing schedule requirements. Program also includes system engineering and technical assistance to support ongoing NRO launches.

P-1 Shopping List Item No. 29										Budget Item Justification	
UNCLASSIFIED										Exhibit P-40, page 1 of 10	



**UNCLASSIFIED**

<b>Exhibit P-40, Budget Item Justification</b>		Date: February 2000
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number		P-1 Line Item Nomenclature
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 29</b>	<b>Medium Launch Vehicles (MLV)</b>	
<p><b>FY 2001 Program Justification</b></p> <p>MLV II (Atlas II) -- Funds system engineering and technical assistance to support ongoing NRO launches. Last NRO launch will be in FY02.</p> <p>MLV III (Delta II) -- Funds launch services for three launches, including integration and checkout, propellants, and storage. Also funds systems engineering, technical assistance, and contract award fee.</p>		
P-1 Shopping List Item No. 29		Budget Item Justification
UNCLASSIFIED		Exhibit P-40, page 2 of 10

**UNCLASSIFIED**

<b>Exhibit P-40A, Budget Item Justification for Aggregated Items</b>										<b>Date: February 2000</b>	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 29</b>										<b>Medium Launch Vehicles (MLV)</b>	
<u>Procurement Items (\$M)</u>	<u>ID Code</u>	<u>Prior Years</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>To Comp</u>	<u>Total</u>
Medium Launch Vehicle II (Atlas IIA)	A	468.275	30.712	31.769	18.573	9.766	4.031	0.000	0.000		563.126
Medium Launch Vehicle III (Delta II)	A										
Less Adv Proc (Prior Year)	A	1614.450	194.271	32.244	37.366	37.395	42.736	37.199	36.947		2032.608
Plus Adv Proc (Current Year)	A	-143.230	-52.715	0.000	0.000	0.000	0.000	0.000	0.000		-195.945
Total MLV III (Delta II)	A	195.945	0.000	0.000	0.000	0.000	0.000	0.000	0.000		195.945
	A	1667.165	141.556	32.244	37.366	37.395	42.736	37.199	36.947		2032.608
Quantity (Atlas and Delta)	A										
Total	A	53	5	0	0	0	0	0	0		58
		2135.440	172.268	64.013	55.939	47.161	46.767	37.199	36.947		2595.734

**Remarks**

## UNCLASSIFIED

Exhibit P-5, Weapon System Cost Analysis									
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number				P-1 Line Item Nomenclature			Date: February 2000		
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 29</b>				<b>Medium Launch Vehicles (MLV)</b>					
Manufacturer's Name/Plant City/State Location				Subline Item					
Boeing/Huntington Beach/CA				Medium Launch Vehicle III (Delta II)					
Weapon System Cost Elements				Total Cost In Millions of Dollars					
	Ident Code	FY 1999			FY 2000			FY 2001	
		Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
QUANTITY - MLV III (DELTA II)	A								
FLYAWAY COSTS	A								
Hardware Recurring - Vehicle	A	5	34.289	171.443			0.000		0.000
Total Flyaway Cost	A			171.443			0.000		0.000
CHECKOUT & LAUNCH COSTS	A								
Launch Services	A			11.620			23.682		27.399
Total Checkout & Launch	A			11.620			23.682		27.399
SUPPORT COSTS	A								
Technical Support	A			6.966			6.703		7.863
Program Support	A			2.463			1.745		2.104
Engineering Change Orders	A			1.779			0.114		0.000
Total Support Costs	A			11.208			8.562		9.967
TOTAL PROGRAM				194.271			32.244		37.366

Comments

This P-5 is for the MLV III (Delta II) Only.

P-1 Shopping List Item No. 29

Weapon System Cost Analysis  
Exhibit P-5, page 4 of 10

UNCLASSIFIED

PAGE 5 - 60

## UNCLASSIFIED

Exhibit P-5, Weapon System Cost Analysis										Date: February 2000				
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature				
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 29										Medium Launch Vehicles (MLV)				
Manufacturer's Name/Plant City/State Location										Subline Item				
Lockheed Martin/Denver/Colorado										Medium Launch Vehicle II (Atlas IIA)				
Weapon System Cost Elements		Ident Code	Total Cost In Millions of Dollars											
			FY 1999			FY 2000			FY 2001					
			Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
CHECKOUT & LAUNCH COSTS		A			0.000									0.000
C-5 Transportation		A				19.091					16.971			5.730
Launch Services		A				0.375					0.257			0.000
Propellants		A												
Storage		A												
Total Checkout & Launch		A				19.466					17.394			5.730
SUPPORT COSTS		A												
Special Studies		A				0.000					0.964			0.000
Technical Support		A				6.836					7.524			7.457
Program Support		A				1.540					3.579			3.044
Launch Base Support		A				2.870					2.308			2.342
Total Support Costs		A				11.246					14.375			12.843
TOTAL PROGRAM						30.712					31.769			18.573
<b>Comments</b>														
This P-5 is for MLV II (Atlas IIA) only.														
P-1 Shopping List Item No. 29										Weapon System Cost Analysis Exhibit P-5, page 5 of 10				

## UNCLASSIFIED

Exhibit P-5A, Procurement History and Planning										Date: February 2000		
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature		
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 29										Medium Launch Vehicles (MLV)		
Weapon System										Subline Item		
MLV												
WBS Cost Elements	Qty	Unit Cost	Location of PCO	RFP Issue Date	Contract Method	Contract Type	Contractor and Location	Award Date	Date of First Delivery	Specs Available Now?	Date Revisions Available?	
LAUNCH VEHICLE HARDWARE												
MLV III (Delta II)												
FY99	5	34.289	SMC		C/OPT	FFP	Boeing	Jan-99	Jan-01	Yes		
LAUNCH OPERATIONS												
MLV II (Atlas II)												
FY99			SMC		C	FP	Lockheed Martin Corp		N/A	Yes		
FY00			SMC		C	FP	Denver, CO		N/A	Yes		
MLV III (Delta II)												
FY99			SMC		C	CPAF	Boeing		N/A	Yes		
FY00			SMC		C	CPAF	Huntington Beach, CA		N/A	Yes		
FY01			SMC		C	CPAF			N/A	Yes		
FY02			SMC		C	CPAF			N/A	Yes		
FY03			SMC		TBD	TBD			N/A	Yes		
FY04			SMC		TBD	TBD			N/A	Yes		
FY05			SMC		TBD	TBD			N/A	Yes		
Other Gov't Costs FY99			SMC		SS	CPFF	Aerospace Corp, El Segundo CA		N/A			
Other Gov't Costs FY00			SMC		SS	CPFF			N/A			
Other Gov't Costs FY01			SMC		SS	CPFF			N/A			
Other Gov't Costs FY02			SMC		SS	CPFF			N/A			
P-1 Shopping List Item No. 29										Procurement History and Planning		
										Exhibit P-5A, page 6 of 10		

UNCLASSIFIED

PAGE 5 - 62

**UNCLASSIFIED**

<b>Exhibit P-5A, Procurement History and Planning</b>		Date: February 2000
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number		P-1 Line Item Nomenclature
<b>Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 29</b>		<b>Medium Launch Vehicles (MLV)</b>
<b>Remarks</b>		
<p>Program Office is restructuring the MLV III (Delta II) Launch Operations contract to provide launch capability through FY05. The need to extend the contract is a result of the GPS Block IIR satellite launch slip due to the increased GPS IIA Mean Mission Duration.</p>		
<p>P-1 Shopping List Item No. 29</p>		
<p align="center"><b>UNCLASSIFIED</b></p>		<p align="center"><b>PAGE 5 - 63</b></p>
<p align="center"><b>Procurement History and Planning</b></p>		<p align="center"><b>Exhibit P-5A, page 7 of 10</b></p>

## UNCLASSIFIED

Exhibit P-10 p.1, Advance Procurement Requirements Analysis (Page 1 - Funding)											Date: February 2000	
Appropriation (Treasury) Code/CC/BA/VBSA/Item Control Number											P-1 Line Item Nomenclature	
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 29											Medium Launch Vehicles (MLV)	
Weapon System											First System Award Date	
MLV											First System Completion Date	
(\$ in Millions)												
Description	PLT	When Rqd	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total
End Item Qty												
CFE	36		195,945	0,000	0,000	0,000	0,000	0,000	0,000	0,000		195,945
GFE												
EOQ												
Design												
Term Liability												
TOTAL AP			195,945	0,000	0,000	0,000	0,000	0,000	0,000	0,000		195,945

**Description:**  
Advance procurement for the Medium Launch Vehicles III (Delta II) program. Advance Procurement funding is required to meet the Contractor's production schedule. Last year in which advance procurement funding is required is FY98, in support of the last five MLV III boosters to be procured (fully-funded) in FY99.

P-1 Shopping List Item No. 29

 Advance Procurement Requirements Analysis  
 (Page 1 - Funding)  
 Exhibit P-10, page 8 of 10

UNCLASSIFIED

PAGE 5 - 64

UNCLASSIFIED

## Exhibit P-21, Production Schedule

Date: February 2000

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

P-1 Line Item Nomenclature

## Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 29

## Medium Launch Vehicles (MLV)

ITEM/MANUFACTURER/ PROCUREMENT YEAR	S E R V	PROC. QTY	ACCEP. PRIOR TO 1 OCT 1998	BALANCE DUE AS OF 1 OCT 1998	FISCAL YEAR 1999												FISCAL YEAR 2000												L A T E R			
					CALENDAR YEAR 1999												CALENDAR YEAR 2000															
					1998				1999				2000				2001				2002				2003							
					O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				
Medium Launch Vehicles III (Delta ID)	USAF																															
FY 1998	USAF	4	0	4																												1
FY 1999	USAF	5	0	5																												5
TOTAL		9	0	9																												6
MANUFACTURER'S NAME BOEING	LOCATION Huntington Beach, CA				PRODUCTION RATES			REACHED			PROCUREMENT LEAD TIME												TOTAL AFTER 1 OCT	24								
					MIN	SHIFT	M	HOURS	A	DAYS	X	ADMIN				LEAD TIME				MFG TIME												
					SUST							PRIOR 1 OCT		AFTER 1 OCT																		
																INITIAL REORDER	24															
REMARKS																																

P-1 Shopping List Item No. 29

Production Schedule

Exhibit P-21, page 9 of 10

UNCLASSIFIED

PAGE 5 - 65



UNCLASSIFIED

## Exhibit P-21 (2), Production Schedule

Date: February 2000

Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number

P-1 Line Item Nomenclature

## Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 29

## Medium Launch Vehicles (MLV)

ITEM/MANUFACTURER/ PROCUREMENT YEAR	S E R V	PROC. QTY	ACCEP. PRIOR TO 1 OCT 2000	BALANCE DUE AS OF 1 OCT 2000	FISCAL YEAR 2001												FISCAL YEAR 2002												L A T E R	
					CALENDAR YEAR 2001												CALENDAR YEAR 2002													
					2000																									
					O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P		
Medium Launch Vehicles III (Delta II)	USAF																													
FY 1998	USAF	4	3	1																										0
FY 1999	USAF	5	0	5			1	1			1																		0	
TOTAL		9	3	6			1	1		1																			0	
					PRODUCTION RATES						PROCUREMENT LEAD TIME																			
MANUFACTURER'S NAME BOEING		LOCATION Huntington Beach, CA			MIN SUST	SHIFT			REACHED			ADMIN LEAD TIME						MFG TIME			TOTAL AFTER 1 OCT									
						HOURS	DAYS	X	D+																					
																					M	A								
																													24	
																													24	
					INITIAL					REORDER																				
REMARKS																														

P-1 Shopping List Item No. 29

Production Schedule

Exhibit P-21 (2), page 10 of 10

UNCLASSIFIED

PAGE 5 - 66

**UNCLASSIFIED**

Exhibit P-40, Budget Item Justification										Date: February 2000	
Appropriation (Treasury) Code/CC/BA/BSA/Item Control Number										P-1 Line Item Nomenclature	
Missile Procurement, Air Force, Budget Activity 05, Other Support, Item No. 30										Cancelled Account (PE 0701111F)	
Program Element for Code B Items:			N/A		Other Related Program Elements:						
	ID Code	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Comp	Total
Proc Qty	A										
Total Proc Cost (\$ M)			10.200								10.200

Description

This account was used in execution year only, to account for those cancelled-year transactions which were financed with current year funds.

FY 2001 Program Justification

N/A

P-1 Shopping List Item No. 30										Budget Item Justification
UNCLASSIFIED										Exhibit P-40, page 1 of 1

**UNCLASSIFIED**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**